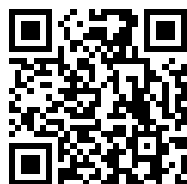
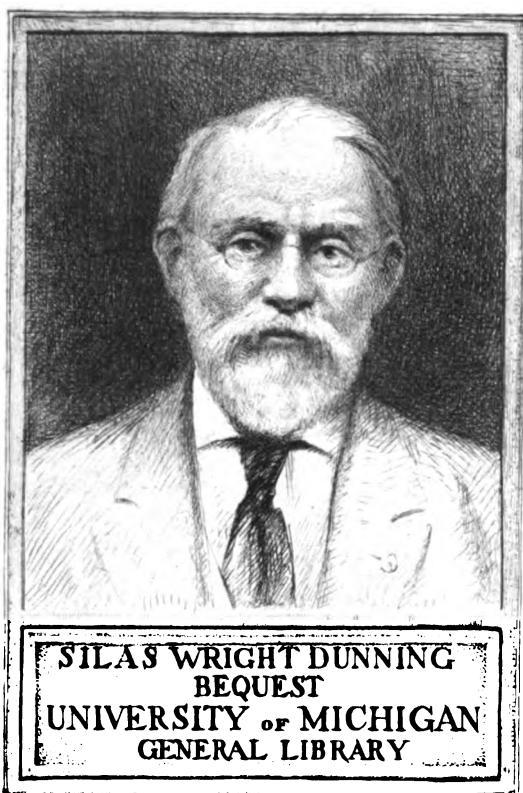

This is a reproduction of a library book that was digitized by Google as part of an ongoing effort to preserve the information in books and make it universally accessible.

GoogleTM books

<https://books.google.com>



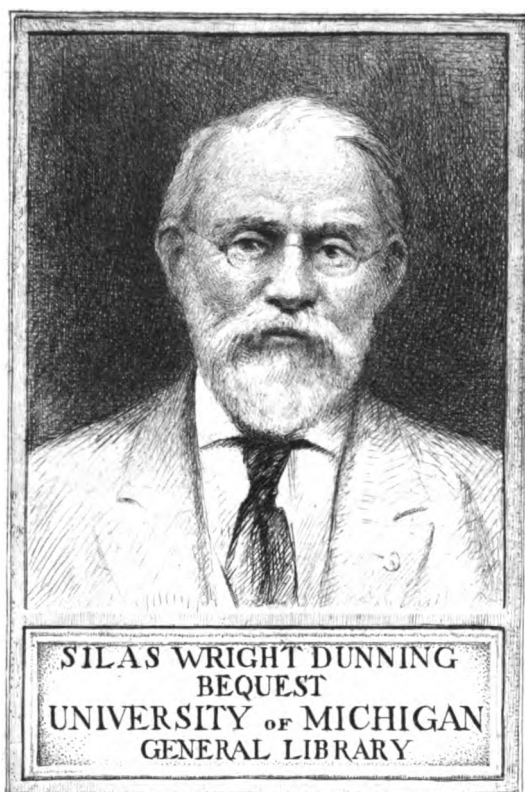
B 1,039,407



SILAS WRIGHT DUNNING
BEQUEST
UNIVERSITY OF MICHIGAN
GENERAL LIBRARY

u
1
.456

THE UNIVERSITY OF CHICAGO
LIBRARY
1215 EAST 58TH STREET
CHICAGO, ILL. 60637



SILAS WRIGHT DUNNING
BEQUEST
UNIVERSITY OF MICHIGAN
GENERAL LIBRARY

4
1
.456

Journal

OF THE

United Service Institution of India.

Published under the Authority of the Council.



SIMLA:

UNITED SERVICE INSTITUTION OF INDIA.

Published Quarterly.

XXXX

Price, Rupees 2-8.

Printed by S. H. LIDDELL, Longacre, Simla.

All Rights Reserved.

United Service Institution of India

RULES OF MEMBERSHIP.

ALL officers of the Royal Navy, Army, Royal Air Force, Colonial Forces, and of the Indian Defence Force, and Gazetted Government Officers shall be entitled to become members without ballot, on payment of the entrance fee and annual subscription.

The Council shall have the power of admitting as honorary members the members of the Diplomatic Corps, foreign naval and military officers, foreigners of distinction, other eminent individuals, and benefactors to the Institution, not otherwise eligible to become members.

Life Members of the Institution shall be admitted on the following terms:—
Rupees 75 + entrance fee (Rs. 10) = Rs. 85.

Ordinary members of the Institution shall be admitted on payment of an entrance fee of Rs. 10 on joining, and an annual subscription of Rs. 10, to be paid in advance. The period of subscription commences on 1st January.

Subscribing members of the Royal United Service Institution, Whitehall, London, are not liable for entrance fee while the affiliation rules are in force.

Life members receive the Journal of the Institution post free anywhere, but ordinary members only in India. All members may obtain books from the library on paying V. P. postage.

Honorary Members shall be entitled to attend the lectures and debates, and to use the premises and library of the Institution without payment; but should they desire to be supplied with the Journal, an annual payment of Rs. 10, in advance, will be required.

Divisional, Brigade and Officers' Libraries, Regimental Messes, Clubs, and other subscribers for the Journal, shall pay Rs. 10 per annum.

Serjeants' Messes and Regimental Libraries, Reading and Recreation Rooms shall be permitted to obtain the Journal on payment of an annual subscription of Rs. 8.

If a member fails to pay his subscription for any financial year (ending 31st December) before the 1st June in the following year, a registered notice shall be sent to him by the Secretary inviting his attention to the fact. If the subscription is not paid by 1st January following his name shall be posted in the Reading Room for six months and then struck off the roll of members.

Members joining the Institution on or after the 1st October, will not be charged subscription on the following 1st January, unless the Journals for the current year have been supplied.

Members are responsible that they keep the Secretary carefully posted in regard to changes of rank and address. Duplicate copies of the Journal will not be supplied free to members when the original has been posted to a member's last known address, and not been returned by the post.

Members or Subscribers to the Journal, intimating a wish to have their Journals posted to any address out of India, shall pay in advance Rupee 1 per annum, to cover foreign postage charges, but Life Members who have left India shall not be liable for foreign postage on Journals.

All communications shall be addressed to the Secretary, United Service Institution of India, Simla.

Contributions to The Journal.

All papers must be written in a clear, legible hand, and only on one side of the paper. All proper names, countries, towns, rivers, etc., must, when in manuscript, be written in capital letters. All plans must have a scale on them.

Contributors are responsible, when they send articles containing any information which they have obtained by virtue of their official positions, that they have complied with the provisions of A. R. I., Vol. II., para. 487, and King's Regulations, para. 453.

Anonymous contributions under a *nom-de-guerre* will not be accepted or acknowledged; all contributions must be sent to the Secretary under the name of the writer, and the paper will, if accepted, be published under that name unless a wish is expressed for it to be published under a *nom-de-guerre*. The Executive Committee will decide whether the wish can be complied with.

The Committee reserve to themselves the right of omitting any matter which they consider objectionable. Articles are only accepted on these conditions.

The Committee do not undertake to authorise the publication of such papers as are accepted, in the order in which they may have been received.

Contributors will be supplied with three copies of their paper *gratis*, if published.

Manuscripts of original papers sent for publication in the Journal will not be returned to the contributor, unless he expresses a wish to have them back and pays the postage.

Dunning
Hayer
9-18-36
32691

To
The Leading Clubs & Messes in India.

PHIPSON & Co.,
LIMITED.

Wine Merchants.

Head Office:—BOMBAY.

Branches:—DELHI,

SIMLA,

KARACHI,

BAGDAD,

and BASRA.

Price List on Application.

United Service Institution of India.

PATRON.

His Excellency the Viceroy and Governor-General of India.

VICE-PATRONS.

His Excellency the Governor of Madras.
His Excellency the Governor of Bombay.
His Excellency the Governor of Bengal.
His Excellency the Commander-in-Chief in India.
His Excellency the Governor of the U. P. of Agra and Oudh.
His Excellency the Governor of the Punjab.
His Excellency the Governor of Burma.
His Excellency the Governor of Bihar and Orissa.
His Excellency the Naval Commander-in-Chief, East Indies.
The General Officer Commanding-in-Chief, Northern Command.
The General Officer Commanding-in-Chief, Southern Command.
The General Officer Commanding-in-Chief, Eastern Command.
The General Officer Commanding-in-Chief, Western Command.

MEMBERS OF THE COUNCIL, 1921-22.

Ex-officio Members

- | | |
|--|---|
| 1. The Chief of the General Staff. | 5. The Quartermaster General in India. |
| 2. The Secretary, Army Department. | 6. The Director, Medical Services. |
| 3. The Hon'ble Mr. Denys Bray, C.I.E.,
C.B.E. | 7. Col. Sir S. Crookshank K.C.M.G., C.B.,
C.I.E., D.S.O., M.V.O. |
| 4. The Adjutant General in India. | 8. The Director, Military Operations—
General Staff. |

Elected Members.

- | | |
|---|---|
| 1. Major-Genl. W. C. Black, C.I.E. | 7. Lt.-Col. R. H. Sweet, C.M.G., D.S.O. |
| 2. Col. W. D. Waghorn, C.B., C.M.G. | *8. Lt.-Col. A. H. R. Dodd. |
| 3. Col. A. F. Cumberlege, O.B.E. | *9. Lt.-Col. C. Reed, D.S.O. |
| *4. Col. H. R. Nevill, C.I.E., O.B.E. | *10. Dr. G. T. Walker, C.S.I. |
| *5. Col. H. Rowan-Robinson, C.M.G.,
D.S.O. | 11. Mr. H. G. W. Meikle, F.F.A. |
| *6. Lt.-Col. A. C. Ogg, D.S.O., O.B.E. | *12. Major R. S. Abbott, M.C. |

* Members of the Executive Committee and in addition.

E. HAWARD, Esq.

SECRETARY & EDITOR

SUPERINTENDENT

LIBRARIAN

BANKERS

..LIEUT.-COL. R.M. Luckock, C.M.G., D.S.O.

..LIEUT. COL. F. A. FINNIS.

..S. SGT. E. F. CLARK, I.O.D.

..Miss E. K. SUSSENS.

..ALLIANCE BANK OF SIMLA, LTD.

1. The United Service Institution of India is situated at Simla.
2. Officers wishing to become members of the United Service Institution of India should apply to the Secretary. The rules of membership are printed on the opposite page.
3. The reading-room of the Institution is provided with all the leading newspapers, magazines, and journals of military interest that are published.
4. There is a well-stocked library in the Institution, from which members can obtain books on loan, free. Suggestions for new books are solicited, and will be submitted to the Committee. Books are sent out to members V. P. for the postage, or bearing by railway.
5. The Institution publishes a Quarterly Journal in the months of January, April, July and October which is issued postage free to members in India and to all life members; but ordinary members wishing to have their journals sent to any address out of India must pay in advance Re. 1 per annum to cover foreign postage charges.
6. Members and the public are invited to contribute articles to the Journal of the Institution for which honoraria will be awarded by the Executive Committee. Rules for the guidance of contributors will be found on the opposite page.
7. **MEMBERS ARE RESPONSIBLE THAT THEY KEEP THE SECRETARY CAREFULLY POSTED WITH REGARD TO CHANGES OF ADDRESS.**
8. When on leave in England, members can, under the affiliation rules in force, attend the lectures and make use of the reading-room, etc., of the Royal United Service Institution, Whitehall, on payment of a subscription of 5 shillings per six months.

Rubbing
with

ELLIMAN'S

Eases
Pain.



ELLIMAN SONS & CO., SLOUGH, ENGLAND.

United Service Institution of India.

JANUARY 1922.

CONTENTS.

1. Secretary's Notes	...	...	...	ii
2. Organisation of a Divisional Area in War. <i>By Major O. W. White, D.S.O.</i>	...	...	...	1
3. Waziristan in 1921. <i>By Lt.-Col. G.M. Routh, D.S.O.</i>				30
4. The Present Situation in the Middle East and Central Asia. <i>A Lecture by an Officer of the Army Headquarters Staff.</i>	...	...	...	62
5. Foch's Place in History. <i>Translated from the "Revue Militaire Générale" by Major E. M. Hutchinson, D.S.O., R.F.A.</i>	...	...	...	79
6. Reviews.				100

SECRETARY'S NOTES.

I.—New Members.

The following new members joined the Institution from 1st October 1921 and 1st December 1921.

LIFE MEMBERS.

Lieut. B. J. Joyce.
Capt. A. G. Petrie.
Capt. J. S. Culverwell.
Capt. L. H. Cockram.

Lieut. H. Redman.
Capt. E. S. Boyton-Smith.
Capt. F. T. Birdwood
Major-General G. R. Rajwade

ORDINARY MEMBERS.

Capt. J. H. Wilkinson.
Lieut. C. H. O. D. Burrell
E. Haward, Esq.
Capt. J. Birdwood.
Major F. Preedy.
Capt. W. G. H. Vickers.
Capt. P. H. Teesdale.
Lieut. P. H. Jones.

Lieut. J. Stephenson
Capt. A. H. Williams.
Lieut. W. J. Colyer.
Lieut. A. M. Atkinson.
Capt. H. C. Latham.
Lt.-Col. G. G. Woodhouse.
Major H. J. G. Gale.
Lieut. L. G. Lang.

Capt. R. Cryan.

II.—Examinations.

Books on Military History and Languages with Dictionaries are available in the Library and the following list of books, which is complete in accordance with the War Office list, may be found useful for reference by officers, studying for promotion examinations or entrance to the Staff College.

These books are available for use by members.

Staff College Examination papers are also available.

Secretary's Notes.

iii

MILITARY HISTORY. (SPECIAL PERIOD.)

1. *The Campaign of the British Army in France and Belgium up to 20th November 1914.*

A.—OFFICIAL ACCOUNT.

Sir John French's Despatches.

B.—OTHER BOOKS.

40 days in 1914 by General Maurice (new edition).

The Battle of the Marne, by G. H. Perris.

1914, by Viscount French.

General sketch of the European War, by Belloc.

The Great War, by Colonel Sedgwick.

My Memoirs, by Ludendorf.

Falkenhayn's book.

Von Kluck's book.

British Campaign in France, Flanders, by Conan Doyle, 1914.

Nelson's History of the War.

Ypres, by German General Staff.

Oxford pamphlets. August 1914. The Coming of the War, by S. Williamson.

Oxford pamphlets. August 1914. No. VII and X.

Times Documentary History of the War, Vol. V. Military, Part I.

" " " " " Vol. VIII Part III.

Der Grobe Krieg Schlacht bei Mons.

Der Grobe Krieg Schlacht bei Lougwy.

2. *The Palestine Campaign.*

A.—OFFICIAL ACCOUNT.

A brief record of the advance of the Egyptian Expeditionary Force 1919.

B....OTHER BOOKS.

Allenby's final triumph, by W. T. Massey.

How Jerusalem was won, by W. T. Massey.

3. *Organization of Army since 1868.*

A....ORGANIZATION OF ARMY SINCE 1868.

History of British Army, by Fortescue.

Outline of Development of British Army, by Genl. Anderson.

Our Fighting Services.....by Sir Evelyn Wood.

B....FORCES OF THE EMPIRE.

The Statesman's Year Book.

Army List.

Articles in Newspapers and Magazines viz., R. U. S. I.

, Army Quarterly, Journal of the U. S. I. of India, etc.

Secretary's Notes.**4. Development and Constitution of the British Empire.****A. THE BRITISH EMPIRE.**

Encyclopedia Britannica—(Contains much concentrated information).

The Statesman's Year Book.

Whitaker's Almanack.

The Colonial Office List.

The British Empire and its History, by E. G. Hawke.

The Government of British Empire, by Jenks 1918.

The British Empire (6 lectures) by Sir C. P. Lucas 1918.

The foundation and growth of the British Empire, by J. A. Williamson 1918.

The beginnings of English Overseas Enterprise, by Sir C. P. Lucas 1917.

The Government of England, by L. A. Lowell 1912.

The Expansion of the British Empire, by W. H. Woodward 1900.

Overseas Britain, by E. F. Knight 1907.

The origin and growth of the English Colonies and of their system of Government, by H. E. Egerton 1903.

A short History of Politics, by Jenks 1900.

The English Constitution, by Bagehot 1909.

The Expansion of England, by Sir J. Seely 1883.

Introduction of the study of the law of the Constitution, by A. V. Dicey 1908.

England in the Seven Years' War, Sir J. Corbett 1907.

Selected Speeches and Documents on British Colonial Policy—
2 Vols. A. B. Keith, 1918.

B.—BOOKS ON SPECIAL PORTIONS OF THE EMPIRE OR WORLD.

The rise and expansion of British Dominions in India, by Sir A. C. Lyall 1894.

A brief history of the Indian Peoples, by Sir W. H. Hunter 1907.

The Nearer East, by Hogarth 1902.

Modern Egypt, by Cromer 1908.

The History of Canada, by W. L. Grant.

Nova Scotia, by B. Wilson 1911.

Report on British North America, by Sir C. P. Lucas.

The Union of South Africa, by R. H. Brand 1909.

Secretary's Notes.

v

Short History of Australia, by E. Scott.

The English in the West Indies, by J. A. Froude 1888.

The Lost Possessions of England, by W. P. Lord 1896.

5. Military Geography.

Naval and Military Geography of the British Empire, by Dr. Vaughan Cornish 1916.

Outlines of Military Geography, by Col. A. C. Macdonnell 1911.

Introduction of Military Geography, by Col. E. S. May.

Imperial Defence.....by Col. E. S. May.

Britain and the British Seas, by H. J. Mackinder 1907.

Military Geography, by Macguire.

Imperial Strategy, by Repington.

War and the Empire, by H. Foster.

Historical Geography of British Colonies (Dominions) 7 Vols. by Sir C. P. Lucas 1906-17.

Vol. 1 Mediterranean.

Vol. 2 West Indies.

Vol. 3 West Africa.

Vol. 4 South Africa.

Vol. 5 Canada.

Vol. 6 Australia.

Vol. 7 India.

The Influence of Sea Power on History, by A. I. Mahan 1890.

Historical Geography of the British Empire by Hereford George.

The Mastery of the Pacific, by A. R. Colquhoun 1902.

Frontiers.....by C. B. Fawcett 1918.

III.—Payment for Articles in the Journal

Articles accepted for publication in the Journal are paid for, and a sum of approximately Rs. 400 is awarded for articles and reviews published in each Quarterly Journal.

IV — Library Rules.

1. The Library is only open to members and honorary members of the United Service Institution of India, members are requested to look upon books as not transferable to their friends.

2. No book shall be taken from the Library without making the necessary entry in the register. Members residing permanently or temporarily in Simla are requested to enter their addresses.

3. The United Service Institution of India is open all the year round—including Sundays—from 9 a. m. until sunset. Books may be taken out at any time provided Rule 2 is complied with.

4. A member shall not be allowed, at one time, more than three books or sets of books.

5. Papers, magazines, "Works of Reference" or books marked "Not to be taken away", or noted as "Confidential" may not be removed.

6. No particular limit is set as to the number of days for which a member in Simla may keep a book, the Council being desirous of making the library as useful as possible to members; but if after the expiration of a fortnight from date of issue it is required by any other member it will be recalled.

7. Applications for books from members at outstations are dealt with as early as possible, and books are despatched per Registered V. P. P. They must be returned carefully packed per Registered Parcel Post within one month of date of issue, or application made for permission to retain them for a further period. This will always be granted unless the book is required by another member.

8. If a book is not returned at the end of four months, it must be paid for, without the option of return, if so required by the Executive Committee.

9. Lost and defaced books shall be replaced at the cost of the member to whom they were issued. In the case of lost books which are out of print, the value shall be fixed by the Executive Committee, and the amount, when received, spent in the purchase of a new book.

10. The issue of a book under these rules to any member implies the latter's compliance with the rules, and the willingness to have them enforced, if necessary, against him.

11. A list of all books presented and purchased and also a list of books useful to members studying for the Staff College and promotion Examinations will be found, under Secretary's Notes, in the quarterly issue of the U. S. I. Journal. Members are invited to note any books which they think might with advantage be procured for the Institution. The suggestions will be placed before the Secretary.

12. Members are invited to contribute presents of books, maps, and photographs of naval and military interest. These may be addressed to the Secretary, U. S. I. of India, Simla. They will be duly acknowledged.

V.—Contributions to the Journal.

With reference to Army Regulations, India, Volume II, paragraph 487, and King's Regulations, paragraph 453, as amended by Army Order 340 of 1913, intending contributors to the Journal of the United Service Institution of India are informed, that action to obtain the sanction of His Excellency the Commander-in-Chief to the publication of any article in the Journal of the United Service Institution of India will be taken by the Committee. Contributors are, therefore, responsible that the sanction of their immediate superior has been obtained, and this should be noted on all articles sent for publication. Articles need not be submitted in duplicate.

Contributors must have their articles either typed or printed.

2. It has been decided to introduce two new items in the Journal headed—

- i. Criticisms
- ii. Notes on current Military and Naval questions.

The rules for (i) to be—

That the criticism should be headed with the title of the article criticised, and the date of the Journal in which published.

That criticisms should be signed with a nom-de-plume, but that critics must disclose their identity to the Secretary.

The rules for (ii) to be the same as for Articles.

Instructions for the Preparation of Drawings and Plans for Reproduction by Lithography.

These should be in *jet* black. No washes nor ribands of colour should on any account be used.

If it is absolutely necessary to use colour (and these are only permissible in line work or names) the following will reproduce photographically, *i.e.* :—

Dark red, dark orange, dark green. No other colour should on any account be used.

VI.—Library Catalogue.

Under Revision.

VII.—Gold Medal Prize Essay 1921-22.

For subject and conditions please see page x.

VIII.—Army List Pages.

The U. S. I. is prepared to supply members and units with manuscript or typewritten copies of Indian Army List pages, at the following rates:—

Manuscript, per page Re. 1.

Typewritten, per page Rs. 2.

IX.—Books.

<i>Books Purchased.</i>		
<i>Title.</i>	<i>Sec. & No.</i>	<i>Author.</i>
1. From Private to Field Marshal.	B. 289 ...	Sir W. F. M. Robertson.
2. The Soul and Body of an Army.	M. 983 ...	Sir Ian Hamilton.
3. Whitaker's Almanac (1922).	... Q. 280 ...	T. Whitaker.
4. English-French and French-English Dictionaries	... Q. 279 ...	F. F. Bovet.
5. Philips' New Systematic Atlas.	Q. 264 ...	S. Philips.

Books Presented.

1. Prints of British Military Operations with Portfolio of Plates.	M. 934 ...	{ Presented by the author. Lt.-Col. C. de W. Crookshank.
2. The Position of the Ex-Service Man, Past-Present-Future ...	M. 226 ...	Presented by Mr. F. George.
3. Official History of Australia in the War 1914-1918-C. E. Bean	M. 985 ...	{ Presented by Messrs. Angus and Robertson, Publishers.
4. Guide to a Third Class Certificate "Reading".	T. 509 ...	{ Presented by the Publishers Messrs. Gale and Polden.
5. Records of the 1-21st Punjabis.	O. 213 ...	Presented by the Regiment.
6. Notes on Law and Procedure as applied to Courts martial	G. 38 ...	{ Presented by the Publishers, Messrs. Gale and Polden.

X....Payment of Annual Subscriptions.

The attention of members is directed to the increase of the Annual Subscription from Rs. 5 to Rs. 10 agreed upon at the General Meeting on 13st September 1920. Many Members who had, prior to this alteration, signed Banker's orders have not notified their Bankers of the change.

A Banker's order form was enclosed in the October issue. It will simplify the work of the Secretary, and be of great benefit to the Institution if all Members who have not already done so will sign and return to the Secretary the Banker's Form aforementioned.

MacGregor Memorial Medallists—*contd.*

- 1895...DAVIES, Capt. H. R., Oxfordshire Light Infantry.
GANGA DYAL SINGH, Havildar, 2nd Rajputs.
- 1896...COCKERILL, Lieut. G. K., 28th Punjab Infantry.
GHULAM NABI, Sepoy, Q. O. Corps of Guides.
- 1897...SWYAYNE, Capt. E. J. E., 16th Rajput Infantry.
SHAHZAD MIR, Dafadar, 11th Bengal Lancers.
- 1898...WALKER, Capt. H. B., Duke of Cornwall's Light Infantry
ADAM KHAN, Havildar, Q. O. Corps of Guides.
- 899...DOUGLAS, Capt. J. A., 2nd Bengal Lancers.
MIHR DIN, Naik, Bengal Sappers and Miners.
- 1900...WINGATE, Capt. A. W. S., 14th Bengal Lancers.
GURDIT SINGH, Havildar, 45th Sikhs.
- 1901...BURTON, Major E. B., 17th Bengal Lancers.
SUNDAR SINGH, Colour Havildar, 31st Burma Infantry.
- 1902...RAY, Capt. M. R. E., 7th Rajput Infantry.
TILBIR BHANDARI, Havildar, 9th Gurkha Rifles.
- 1903...MANIFOLD, Lieut.-Colonel C. C., I.M.S.
GHULAM HUSSAIN Lance-Dafadar, Q. O. Corps of Guidesa
- 1904...FRASER, Capt. L. D., R.G.A.
MOGHAL BAZ, Dafadar, Q. O. Corps of Guides.
- 1905...RENNICK, Major F., 40th Pathans, (specially awarded
gold medal).
MADHO RAM, Havildar, 8th Gurkha Rifles.
- 1906...SHAHZADA AHMAD MIR, Risaldar, 36th Jacob's Horse.
GHAFUR SHAH, Lance-Naik, Q.O. Corps of Guides Infantry.
- 1907...NANGLE, Capt. M. C., 92nd Punjabis.
SHEIKH USMAN, Havildar, 103rd Mahratta Light Infantry.
- 1908...GIBBON, Capt. C. M., Royal Irish Fusiliers.
MALANG, Havildar, 56th Punjabi Rifles.
- 1909...MUHAMMAD RAZA, Havildar, 106th Pioneers.
- 1910...SYKES, Major P. M., C.M.G., late 2nd Dragoon Guards.
(specially awarded a gold medal).
TURNER, Capt. F. G., R.E.
KHAN BAHADUR SHER JUNG, Survey of India.
- 1911...LEACHMAN, Capt. G. E., The Royal Sussex Regiment.
GURMUKH SINGH, Jemadar, 93rd Burma Infantry.

MacGregor Memorial Medallists—Contd.

- 1912...PRITCHARD, Capt. B.E.A. 83rd Wal'ahjabad Light Infantry
(specialy awarded a gold medal).
WILSON, Lieut. A. T., C.M.G., 32nd Sikh Pioneers.
MOHIBULLA, Lance-Dafadar, Q. V. O. Corps of Guides.
- 1913...ABBAY, Capt. B. N , 27th Light Cavalry.
SIRDAR KHAN, Sowar, 39th (K.G.O.) Central India Horse.
WARATONG, Havildar, Burma Military Police (specially
awarded a silver medal. .
- 1914...BAILEY, Capt. F. M., I.A. (Political Dept.)
MORSHEAD, Capt. H. T., R.E.
HAIDAR ALI, Naick, 106th Hazara Pioneers.
- 1915.. WATERFIELD, Capt. F. C., 45th Rattray's Sikhs.
ALI JUMA, Havildar, 106th Hazara Pioneers.
- 1916...ABDUR RAHMAN, NAIK, 21st Punjabis.
ZARGHUN SHAH, Havildar, 58th Rifles (F. F.)
(Specially awarded a Silver Medal).
- 1917...MAIN AFRAZ GUL, Sepoy, Khyber Rifles.
- 1918...NOEL, Capt. E. W. C., Political Department.
- 1919...KEELING, Lt.-Col. E. H., M.C., R.E.
ALLA SA, Jamadar, N. E. Frontier Corps.
- 1920...BLACKER, Capt. L. V. S., Q. V. O. Corps of Guides.
AWAL NUR, C. Qm. Havildar, 2nd Bn. Q. V. O. Corps of
Guides. (Special gratuity of Rs. 200.)
- 1921...HOLT, MAJOR A. L., Royal Engineers.
SHER ALI, Sepoy No. 4952, 106th Hazara Pioneers.

The Journal
OF THE
United Service Institution of India.

Vol. LII.

JANUARY 1922.

No. 226

ORGANISATION OF A DIVISIONAL AREA IN WAR.
An Illustration to Field Service Regulations
Part II.

By Major O. W. White, D.S.O., Dorset Regt.

Now that the new provisional edition of Field Service Regulations Part II, Operations, has been published, it may not be out of place to consider some actual experiences, in the light of the principles laid down, especially where administration and organisation are referred to.

During actual operations, the stress of work and the feeling that conditions are new tend to prevent the use of or reference to books of regulations dealing with principles. All ranks have to work almost on what, by study, has become natural in times of peace.

In times of peace, however, the problems of administration and organisation which are daily met with in war are rare and hardly affect the existence of the regimental officer.

As a consequence, in studying his Field Service Regulations there must be much, when the principles given refer

Organisation of a Divisional Area.

to " Q " matters, which the regimental officer cannot entirely grasp.

Lastly, from our national temperament and military training, the regimental officer, as well as the budding Staff Officer, is more attracted by the operations branch of the Staff, and apt, because things have generally gone well from an administrative point of view, to consider the thousand and one details to be fixed and arranged as purely automatic, and requiring little preparation or thought.

It will be noticed how this somewhat natural trend of thought is combatted in Field Service Regulations by constant reference to the preparations and organisation required in all phases of the art of war.

The experiences given below are illustrative of certain portions of Field Service Regulations Part II, and special point is made of organisation required in a Divisional Area in war.

The episodes are taken from the operations of the 5th Division on return from Italy, when the Division was thrown into the line in front of AIRE as part of the XI Corps under Lt.-General Sir R. Haking.

The period naturally divides itself into two portions:—

- (a) The encounter battle.
- (b) The consolidation and organisation of the area, firstly with a view to breaking any further German offensive, but always with a thought to the subsequent advance on our part.

FIRST PHASE. { Move.
 Advance.
 Encounter battle.

On the 10th April 1918, the 5th Division was on the move from the LUCHEUX Area to relieve the 2nd Canadian Division in the line south of ARRAS. At 10-30 hours

telephonic orders were received to cancel the relief and move by tactical trains to the north passing to the First Army. This move was complicated by the fact that the Division was still a 13 Battalion one and "Traffic" had not known this when arranging the trains. The transport and guns were to march. (F. S. Regs. II, Section 37, para. 9.)

A point which arises at once is what exactly shall be carried with the troops. Moving into an uncertain situation, where the front is not fixed, comparable to moving warfare the following arrangements were found to meet the case:—

- (a) Hot food was arranged for the journey by having meals prepared in hot food containers supplemented by soup placed in petrol tins and kept hot by being packed with hay in a pack, *i. e.* the improvised hot food container so often used in France. With a moving front one cannot be certain of hours of arrival or even that one will reach the scheduled railheads.
- (b) Tools for use on arrival. These are sure to be urgently required if the enemy are pressing. Tool wagons should be unloaded and the tools placed in the personnel trains with the men. If they are not urgently required they can be dumped near the de-training station and picked up by the transport on arrival. This does not apply if the "group" of tactical trains allows 2 transport trains in it. Tool carts are then on train.
- (c) Ammunition. All troops were issued with an extra bandolier. This is collected under unit arrangements and forms a first reserve on arrival. This is better than carrying extra boxes as, if the unit moves straight out as advance guard or outposts or into battle on detraining, boxes tend to get left behind

Organisation of a Divisional Area.

or forgotten in the hurry. Further, one extra lorry per brigade and one for the pioneer battalion from the M. T. Company, carrying a full load of S. A. A. & 4 boxes V. P. A., proceed independently to the detraining station and there report to the "Q" officer superintending the detraining. This forms a first mobile reserve. Directly the situation is clear and the troops move to some destination, these lorries are moved by the "Q" officer to a suitable spot and are free to return for the tools carried on the train or to assist with great-coats or to fetch more ammunition. Anyway, the troops detrained will be in a position to dig or fight at once.

(d) **Horses.**—If there are any boxes or vans on the train that will carry animals, the following horses must always be taken. It is always possible to improvise a ramp of some sort to detrain a very few animals anywhere.

(1). Commanding officer's horse of each battalion.

(2). Pack animals with explosives for each field company.

(e) **Medical.**—The regimental medical officer must take enough bandages, stretchers, etc., to run a regimental aid post unassisted for twelve hours.

In rapid moves into battle, the division will nearly always detrain before its transport arrives and in the case under consideration the transport did not arrive till the early hours of the next day, although the division was in action by 12-00 hours and the artillery by 17-30 hours.

The situation was not clear and it was not certain where the line had stopped. There were still parties of Portuguese

to our front and the British divisions who had been closing the gap were apparently rather scattered. Our orders were, directly the division had been got together, to advance and occupy an outpost line south of ST. VENANT.

Orders were given for the 13th and 95th Brigades to close billet and bivouac in the vicinity of their detraining stations and the 15th Brigade to proceed to ISBERGUES and bivouac and close billet there. (F. S. Regs. II. Sect. 47. para. 6.)

At 05-00 hours on the 12th, the Divisional Commander, Major General Sir R. Stephens, collected his brigadiers by car, held a conference with them at THIENNES Station, gave his orders for the advance and explained as much as was known of the situation. (F. S. Regs. 115, gives notes on conferences before a deliberate attack. A conference may also be used as in the example quoted to rapidly explain the situation and to save time.)

Information as to dumps, etc. in the area had been obtained previously from Corps " Q " and this was passed on. There was a corps S. A. A. dump at TREISENNES, but this was being cleared back in view of the enemy advance.

The guns could refill, if able to, from the old army dumps on the St. VENANT' CROIX MARAISSE road, though in view of the enemy's artillery activity, this was not peculiarly healthy.

On reaching divisional headquarters at LA JUELLE after the conference, fresh orders were, however, received. The line on our immediate front and north had been pushed in and the enemy were entering MERVILLE with their advanced guards on the MERVILLE—VIEUX BERQUIN road. The 5th Division was to advance at once, re-capture MERVILLE and drive back their advanced troops.

The role of the division in this operation is similar to that of an advanced guard (F. S. Regs. section 83), as, apart

Organisation of a Divisional Area.

from a natural desire to re-establish our line as far forward as possible and convenient, other troops would have had to be brought up had the Germans continued their advance in strength and the division therefore fulfilled the duty of gaining ground for such troops to arrive and deploy and also, by driving in the enemy's covering troops, of enabling the commander to arrive at a decision as to how to meet the situation. (F. S. Regs. 83. (2).)

Orders for our advance were at once sent out embodying the new instructions.

The 95th Brigade was ordered to march north of the NIEPPE forest, the 13th Brigade through TANNAY on MERVILLE along the south of the forest and the 15th Brigade from ISBERGUES, south of the canal through ST. VENANT. (F. S. Regs. 83. (2) as to frontage and vigorous action.)

Administrative instructions on the situation were issued to concentrate the divisional train on arrival from brigade groups and move it clear of the fighting troops so as to free the roads for ammunition, ambulances, and if the advance continued, for troops in rear to follow us. BOESEGHEN was indicated as a suitable first concentration point. (F. S. Regs. II. section 28. para. 54.—importance of keeping roads clear behind the fighting troops and section 33. (2)—grouping of baggage and supply vehicles.)

An advanced S. A. A. dump was opened at THIENNES and it must be remembered that transport and guns were still away from and several hours behind the division. Units were ordered to dump their packs and second blankets, and personnel not taken into action were to be left to join the transport on arrival.

The move commenced and advanced divisional headquarters left, the G. O. C. intending to reconnoitre the position personally. (F. S. Regs. II.—73.)

Organisation of a Divisional Area.

7

About 12-00 hours, however, the situation known to the higher command had changed and again fresh orders were issued by the Corps that the enemy were in MERVILLE in strength and that the division was to dig in and hold on to the last on the line LA MALADERIE north of ST VENANT to LAMOTTE.

This order was sent on to the G. O. C. at once, it being obviously not an order on which a staff officer could act for him. (F. S. Regs. II.-107 (5).) The results of the G. O. C.'s own reconnaissance would certainly settle the action he took on this order.

The division was advancing on three roads, each brigade separated from the others by obstacles. This had been unavoidable, as time is the essential factor in moving warfare and our original orders were to push on and drive back the enemy. By the time the order reached the G. O. C. 5th Division, he had practically completed his reconnaissance, and it was not clear whether the Corps, in their appreciation of the situation and consequent orders, had had sufficient data as to the actual situation. Anyway the G. O. C. had to make a decision. He decided to push on and anyway get clear of the wood, concentrating his division forward and in the teeth of the enemy, and leaving his pioneers to commence work on defences on the line indicated in the order. (F. S. Regs. II. 67. (5).)

In view of the situation as seen on the spot it was essential to prevent the Germans from getting a footing in the forest through which they would have been able to trickle men and carry on the attack by infiltration. (F. S. Regs. II.-126. (4). Further, by advancing we should secure those tactical points which would be of assistance to the enemy in his advance and attack. (F. S. Regs. II.-83. (2). *i. e.* bridges and exits from MERVILLE.)

Organisation of a Divisional Area.

The change in the situation did not materially affect the administrative arrangements already made. Refilling point was fixed at the train concentration point, this and other matters having been settled at the usual daily "Q" conference. Areas were indicated for the brigade and artillery transport and wagon lines on arrival and "Q" rejoined advanced headquarters which were then at THIENNES School, the offices of "G" "Q" and "C. R. A." being all concentrated together in one room. This, although noisy, undoubtedly assisted that constant liaison which is absolutely essential at such times.

On the way from LA JUMELLE we were faced by an urgent problem. The roads were rapidly becoming blocked by refugees both from MERVILLE and also the villages which the Germans had not yet reached. Also a certain number of stragglers from the sorely tried divisions in front were found. A stragglers' post was improvised with military police, and, with the assistance of an interpreter, all the refugees were diverted into side roads and the tow-path of the canal. Refugees are always a great difficulty to a force meeting an advancing enemy and in this case the divisional mounted police were, of course, miles away with the transport. The provisions of F. S. Regs. II.-94. (2). do not quite meet the case—the urgent need being to clear them off roads required by the troops and push them back clear of the zone of operations. Once out of shell range they can more easily be directed and concentrated, this coming under the control of the Corps and the civil powers. (F. S. Regs. II.-144, last sentence of (1) applies to such cases to a certain extent.)

By 18-00 hours our infantry had driven back the enemy's advanced troops and were holding a line just in advance and clear of the forest.

The divisional artillery had come straight into action off the march at between 17-30 and 18-00 hours. The situation

an
by
ch
of
d.
d,
ere
Re-
ad-
lice
ovi-
e-
the
ons.
and
and
(1)
y's
and
off
tion

tactically was clear—the enemy might be expected to attack again on us or on either side or both, but we knew where our front was and the division was distributed to deal with the situation.

Our frontage, starting from the North, extended from the BOIS D'AVAIL across the front of the BOIS D'AMONT to the canal, 5,500 yards in a straight line. On this front there were 4 battalions, two of the 13th on the right, and two of the 95th on the left with the supporting battalions of each brigade behind them clear of the edge of the wood.

The 15th Brigade was in the forest round the HAVER-SHERQUE — ST VENANT road and round LE TOUQUET. (F. S. Regs. II.-116. (3).—frontages in defence.)

The factors ruling our frontage in this case were primarily the closing of the gap and getting into touch with the troops on each side. It was not an allotted sub-division of the corps front, anyway at first. The enemy attacked that night and again next day, but it was now apparent that we had stopped them and the troops on our flanks were holding the enemy too.

As we consolidated (F. S. Regs. II.-127. (11).) urgent demands were made for barbed wire and tools. Tools had been located by an attached officer at the I. W. T. Depot at NEUFPRE and lorries, once they had dumped their ammunition, were sent to collect them. One lorry, with an officer and man of the East Surrey regiment got through *via* HAZEBROUCK and LA MOLETTE and delivered the tools to the front line of the left brigade. Wire, however, seemed non-existent and that first night none was available from R. E. resources. Orders were accordingly issued to brigade transport officers to dismantle all fences in their neighbourhood and send up what they could thus collect. This did not produce much of course, but enough was collected, actually delivered and used in the first 18 hours to wire dangerous points. Wire was also put up in front of the LA MALADERIE line covering

Organisation of a Divisional Area.

the spots where the field of fire was weakest. Wire was also collected by Corps "Q" and sent up, in one case on the first night by motor car.

Within three days the movement to our front and on our flanks had ceased. The German attacks had failed and we had, by minor operations, even considerably improved our situation.

It was time, therefore, to pass from hasty reconnaissances and improvisations to meet each situation to the deliberate but rapid organisation of the area allotted to us.

PHASE II. ORGANISATION AND POSITION WARFARE.

The work required in organising an area is dealt with in F. S. Regs. II. as below.

F. S. Regs. II.-132-133. Organisation and occupation of a defensive position and system.

But, in addition to this, many of the points given in 125—Organisation of the battle field — apply to defensive organisation also.

Further, it is profitable to remember the headings in 131-(3), headings (I), (III), (IV), (V), and (VI), as although these give the hints by which one may recognise enemy activity, they also represent in a tabulated form what work will be required in any area to prepare it for attack or defence.

Headings (II), (VII), (VIII), (IX) and (X), though not in themselves actual organisation, cannot be carried out without preparation and that requires organisation.

In addition to this, there is the supply and accommodation of troops not actually in the line, the provision of comforts to amuse them and thereby improve their morale, and, last but not least, their cleanliness and sanitation. The principles affecting these are dealt with more particularly in Chapter V, Quarters, especially affecting the case being sections (47)-

Organisation of a Divisional Area.

11

(51)-(13) and (66). Where you have a fixed outpost zone, the troops in rear, even in the same divisional area should be given the maximum comfort without impairing their readiness for action, in fact be treated as troops behind the line. This readiness for action will be most easily ensured by "Q" arranging bathing, amusements, delousing &c., on a divisional time table based on the limits assigned by "G" within which any unit must be ready to move.

The principles given in 147-(4), especially regarding improvement of communications and reduction of carrying parties, 147-(5), (8), (9), 161-(2), 163-(2), (3), (4), (5), (6), (9), (10), also affect the organisation of the area, as faulty arrangements at first may entail prodigious work when the defensive changes to the offensive. One must always look ahead.

It is not proposed to give further references to Field Service Regulations in the subsequent portion of this narrative unless a particular principle calls for attention.

It will be seen from the above references that much is required and having noted these principles it will be easy for the reader to compare a definite story with these rules.

The area had never been fought over. The only trenches existing were the remains of an old 1914-1915 G. H. Q. line through the middle of the western portion of the wood which was taken at first as the basis of the Divisional battle zone, (Battle position—F.S. R. II.-132) until such time as we could, by minor operations, drive the enemy far enough back to establish our battle positions entirely in front and clear of the edge of the wood. This was the G. O. C.'s immediate tactical intention. Pending this, it was essential to establish our battle position out of the range of the intense mortar bombardment to be anticipated before another main attack—F. S. R. II.-147.

We were therefore in the happy position of being able to make our area, provided we conformed tactically with our

Organisation of a Divisional Area.

flanks and generally under the corps instructions, exactly as we wished.

The enemy were still pressing on the front to our north, *i.e.*, round KEMMEL and to the south of that place and also at GIVENCHY to the south.

First the battle position was selected and distribution of troops settled.

The personnel not taken into battle were put on to the divisional line. They lived in and worked continuously there until the situation had obviously reverted to trench warfare, when they rejoined their units.

Then came the other urgent matters, tabulated below. Detailed description, where necessary, is given subsequently.

1. Communications--(a) Signal { Railway.
 { Roads.
 { Tracks.
 { Canals.
 { Bridging.
2. Traffic control—Stragglers Posts, Refugee Control,
P. O. W. Collecting Posts.
3. Accommodation—In front and for reserves.
4. Supply— { Ammunition.—Royal Artillery.
 { " " —Infantry.
 { Normal supplies.
 { Ordnance Stores.
5. Organisation of defensive sectors—Provision of reserves
of material.
6. Battle and R. E. stores.
7. Water supply.
8. Evacuation of sick and wounded { R. P.'s. A. D. S.
 { M. D. S. W. W.
 { C. P.
9. Amusements and Recreation. { Canteens.
 { Theatre.
 { Y. M. C. A.'s.

10. Baths and provision of clothing.

11. Agricultural salvage, in this case necessary owing to the duration of the war and necessity for aiding the recent refugees.

12. Cemeteries.

13. Anti-gas measures—Gas police Prophylactic measures.

14. Railhead reinforcement camps and accommodation for drafts and leave parties.

The order given is primarily that of the importance in the particular area, but of course work went on almost simultaneously on most headings at once

As regards communications, no detailed reference is made to Signal communications, as this is an entirely specialist subject.

The only points of general interest were:—

(a) the use of the canals, which were of the greatest assistance for sunk cables, far preferable to buried cables, and much less vulnerable.

(b) The signal installation put in on the railway system. This was primarily for signals controlling the railway traffic and consisted of a telephone operated by signallers from the pioneer battalion.

It will be seen from the map attached that the division was peculiarly situated. Down the centre of our sector ran the NIEPPE forest, over 10,000 yards in depth and nowhere less than 2,000 yards broad, except for the narrow "waist" which separated the western from the eastern portion.

This wood, though it had been partially cleared of undergrowth for fascines &c., was thick, full of irrigation channels, most of which were so blocked as to render it marshy. Having been occupied by Portuguese and coloured forestry units, it was particularly insanitary and the haunt of voracious mosquitoes.

Organisation of a Divisional Area.

It will also be seen from the map how limited we were in roads, not only laterally but also from front to rear. The roads to the north either ran out of our divisional sector or were so roundabout and of such inferior quality as to be practically negligible.

To the south we had the THIENNES-TANNY-MERVILLE road. This, hemmed in between the canal and the wood, must have been obvious to the enemy as an important artery and we were constantly expecting it to be blocked or rendered practically useless by continual shelling or gassing. Further, the wood being so bad for horse transport, large carrying parties would be necessary and the G.O.C. Division hated carrying parties. They tired the men and generally lowered the morale. Some alternative had to be devised and it was suggested that the "push" tram tracks left by the foresters should be exploited. After the reconnaissance on the third day after we arrived it was realised that there were enormous possibilities for light railways. The Higher Command naturally were loath to risk much material or rolling stock, but thanks to the good offices of the 1st Army Light Railway Officer, Lt.-Col. Burbanks, Canadian Bn., we got a whole Railway Bn. on the 16th April, 4 days after arrival and work was pushed on. The first work was the main line from the east end of the wood from the MEREDITH (The Halt) to HARSTONE (Tannay Station) with a branch to THIENNES Station so as to have two termini and alternative stations for use during hostile long range shots. Once this main line was fixed in, the branches and switches could be put in.

It may be easier to follow if the expansion of the railway is dealt with now.

The main line being completed, fresh lines were put in to feed the right sector—the LAURIERS line and GREENWOOD and CORBIE lines surveyed. Then the BALLOON switch

was put in round the northern portion of the East wood to serve the guns there and afford an alternative route in case of shelling.

The heavy guns on arrival on the north called for assistance and the STARKEY-BOWMAN line with C. P. R. switch were laid for them. Finally a switch was laid into the M.D.S. in the N.-W. corner of the wood and the HARSTONE (Tannay) line extended to HOULERON ferry and finally to ISBERGUES & LA LACQUE Camp.

This latter work was entirely for personnel trains for the Reserve Brigade then stationed at LA LACQUE to get up to their alarm positions. Concurrently with the latter work the Divisional A. R. P. at CASA BIANCA was joined by a special line to WATT station and siding. This enabled ammunition to be directly unloaded from broad gauge trains at THIENNES and transported to the A. R. P. without any road transport. The A. R. P. at CASA BIANCA was never spotted by the Germans; this was due to the careful screening of the ammunition line and the absence of extra traffic owing to road transport being unnecessary to the A. R. P. and only necessary for certain batteries in their firing positions.

All this was not done at once of course, but on the night of the 24-25th April the first casualties were evacuated direct from MEREDITH by train to TANNAY and the first complete ration and water train supplied a Brigade in the line without having to use any transport and carrying parties had only a short carry.

In a scope of this paper it is impossible to give more details. The railway to the end was entirely under "Division Q" control—a special traffic officer being appointed. This was of the greatest advantage as although full facilities were given to Corps troops (Heavies, Tunnellers and Gas) yet the Division could always direct traffic into sidings and use the railway for tactical moves.

Organisation of a Divisional Area.

The railway was commenced on the 17th April. First train for wounded and rations ran on night 24.25th. Rolling stock then consisted of 2 tractor petrol engines and six trucks of various capacities.

The railway was completed on the Divisional sector on 11th July, when it ran as shown on the map.

Tractor drawn on 20 lb track.—West terminus OLA at NEUFPRE. North terminus at THIENNES. East terminus at CHAPELLE BOOM

Push tracks.—9 lb track—3 switches in the wood and the DEVISE & ARREWAGE extensions towards the front line east of the wood.

In addition to the C. P. R. &c., heavy lines served the Corps Heavies north of the wood.

There were 18 stations in all on the line, each with a small siding and a telephone control at important ones.

The rolling stock had increased to:—

8 Motor Tractors.

15 Water wagons (3-400 gallons & 12-150 gallons.)

20 Ambulance trucks.

84 Various trucks carrying from 10 tons to one ton each.

The timings for the routes were:—

LA LACQUE to MEREDITH	... 2 hours.
THIENNES to MEREDITH	... 1½ „
HARSTONE to MEREDITH	... 1½ „
HARSTONE to CROWE	... ½ „

After the departure of the Canadian Bn., on the completion of the mainline and BALLOON switch, the whole work was done by one Light Railway operating section, one platoon of Divisional Pioneers, and 12 Pioneer signallers. Camouflage and screening was always done after the survey before work commenced. (F. S. R. II.-147. (8).)

The daily tonnage from May onwards increased from 500 to 800 tons and included all supply services, all brigade and and most battalion reliefs, over 50 per cent. of the ammunition supply, besides specials for senior officers, cement trains for tunnellers, gas trains for special Brigade R. E., practice alarms and on occasions theatre specials from the support Battalions to the theatre at THIÉNNES.

Roads and Tracks.—In addition to the railway, the towpaths were taken in hand and lightly metalled, where possible widened and converted into "UP" traffic routes.

Traffic circuits in accordance with Corps orders were also carefully laid out, bridges were constructed as shown on the map on the canals to enable troops to easily move north & south for counter-attack purposes.

A Pioneer Officer, with one platoon was appointed "Tracks Officer", and tracks were cut and taped for use by day and night through the eastern portion of the wood. Sign boards were put up at all places where tracks crossed and where they passed through defended lines.

Foot bridges were put up where necessary on all these tracks, these being specially required on the tracks south of the wood where several broad drains led to the canal.

Canals.—A point requiring early decision was whether the canals could fully be used as methods of communication or not.

After consultation, the importance of easy communication and facilities for moving troops in the forward area was held to outweigh the advantages of carriage of supplies by towing and it was settled that the waterways east of TANNAY—THIÉNNES would not be used; bridges were accordingly erected where required.

Canals were used, however, for the evacuation of the wounded from the M. D. S. to Fort GASSION, AIRE and

Organisation of a Divisional Area.

the carriage of reinforcements from WITTES Divisional Reinforcement Camp to HOULERON where they could be put on the Divisional Railway and despatched to their Brigade transport lines or the vicinity of them.

The I. W. T. provided the necessary barges and launches which were operated by the A. D. M. S. or the D. A. A. G. of the Division in co-operation with the Railway traffic officer.

A. P. M. Duties.—These consisted of the control of the refugees, provision of Prisoner of War collecting stations and the reconnaissance for and arrangement of stragglers posts for the day of battle, and traffic control.

No civilians were allowed to reside east of the old G. H. Q. line, *i.e.* general line STEENBECQUE Station—BAS HAMEL Footbridge.

Under control in cloudy weather, they were allowed to harvest and salve between certain hours as far east as the LA MALADERIE—LA MOTTE line.

In event of hostile advance all refugees were to be diverted by country tracks south and north of THIENNES and across the canals to ensure that our main roads were clear. [F. S. R. II-125. (7).]

Stragglers posts were not easy to arrange as a wilful straggler getting into the wood would be hard to control. Efforts were therefore made to ensure that no stragglers could pass (a) the LA MALADERIE—LA MOTTE line where all passages had posts, (b) the main crossings over the canals west of this.

The front line was maintained by Regimental police with a Military Police post on the main traffic routes, and the second line entirely by M. P. [F. S. R. II-125 (6).]

Traffic control in this area was facilitated by the A. P. M. under arrangements made by "Q". Wherever blocks were likely, *i.e.*, PONT DE THIENNES, THIENNES Village,

CROIX MARAISSE, STEENBECQUE Village and LE BAS, posts were stationed with mounted patrols with definite areas on all main routes. These patrols were accompanied by Gendarmes when refugees were to be diverted off main roads on to refugee routes.

Accommodation.—This, after communications, was the most important consideration. Morale and fighting efficiency cannot be maintained unless the troops are able to rest properly.

It was decided, therefore, to establish hutted camps for all troops necessarily in the wood—at first two Brigades in the line and the reserve Brigade with two Battalions in the Divisional line and two near the ST VENANT—MORBECQUE road. Pioneers on the old G. H. Q. line, and Wagon and transport lines were not materially altered from the original disposition made on the 12th April and were:—

13th and 15th Brigades.....	TANNAY.
95th Brigade.....	STEENBECQUE.
Train. 2 Companies.....	STEENBECQUE.
„ 2 Companies	BOESEGHEN.
Pioneer Battalion.....	LE FORET (CASA BIANCA).
D. A. C.....	Nr. Canal on BOESEGHEN— BLARINGHAM road.
Field Companies.....	59th, 491st, & 527th with their Bde. Groups.
Royal Artillery.....	15th & 84th Bdes., RFA.— TANNY—HOULERON.
„ „	27th Brigade, RFA.—STEEN- BECQUE.
D. A. D. O. S.	AIRE & then WIDDEBROUCQ.

When trench warfare had really returned and the railway was functioning, the front was thinned and only troops of the line and support battalions were kept in the wood, the rest being billeted outside,

Organisation of a Divisional Area.

The reserve brigade was first at STEENBECQUE and latterly at LA LACQUE with the troops billeted in the villages and huts.

The difficulties regarding accommodation were the provisions of materials and working parties. A standard (Divisional pattern) hut for 12 men was made by the R. E. and raw material provided gradually, the units detailing wherever possible the men who were going to live in them to make the huts.

Each camp was scattered to aid camouflage and minimise risk of shell and bomb casualties but were on standardised plan as sketch attached. (Appendix 2.)

Where a complete entrance circuit was impossible or would involve too much labour or was too hard to screen, one track "in and out" with a siding and turning point only was made, but still the order forbidding transport into the camp itself was enforced.

No special points call for reference as regards the billets etc. for the units out of the wood.

The hutted camps are clearly marked on the map.

Supply arrangements.—These do not call for special comments. Ammunition "dumping" was discouraged in the Division; bar what had to be kept at the guns or with units, everything else was to be kept in the mobile reserve—D. A. C. It was felt that the days of position warfare were drawing to a close and Divisional units must be accustomed to trust to the mobile system of ammunition supply.

The locations of all supply units and Headquarters are shewn on the map and normal systems were employed. The actual forwarding of rations by train has already been touched upon.

When "bagging" rations for despatch up the line, 6 to 8 men's rations can be placed in a sand bag.

During the hot weather the lime juice was made up with sugar and the petrol cans filled with this "lemonade".

Bully beef was hardly ever issued "uncamouflaged", the Q. M. S.'s were encouraged and assisted to make this ration up into "rissoles" or "sausage rolls" which were much appreciated in the trenches and were more economical and filling to the soldier.

From the positions shewn on the map it will be seen how far the principles laid down as to positions for Headquarters and Units were conformed with.

Organisation of the Defensive Lines.—"G" having settled the outpost and defensive zone, it becomes "Q's" duty to organise and supply these to enable them to fulfil their role.

In this case however, the Higher Command stepped in and Corps orders laid down exactly what was to be dumped as reserve in each line.

The principle was that each defensive zone must be supplied with sufficient ammunition and food to defend that line even if all communications to the rear are cut or the position even isolated.

In this case 9 dumps containing S. A. A., grenades, supplies and water were made along the Divisional line, a Corps dump of all the species of Infantry munitions, supplies and water at U.15-c. and similar dumps on the old G. H. Q. line across the Western wood.

This question of such dumps is a very debatable one.

It is certain that such dumps are rarely used and entail a large amount of work to place, check and ensure that they are properly "turned over". This is specially important as regards the water. Dumps however, when installed, should be as small as possible, should be signboarded clearly and should have definite caretakers, who are members of the nucleus garrison of the line allotted to them.

Organisation of a Divisional Area.

Battle, R. E. Stores and Battle Store Dumps.—Battle stores were delivered by railway to units. The allotment of stores (extra shovels, wire cutters etc.) was always limited to what it was certain could be used. The principle worked on was: (a) The man who "went over" to carry only necessities. (b) Within reach of the Brigade Headquarters were established small mixed dumps of all kinds of stores and munitions. (c) Units were encouraged to look on salvaged stores as their first and readiest form of replacement in all cases except emergency. Emergencies were met from Brigade resources and the small dumps. (d) Divisional "Q" ensured that the small dumps were kept full and, to deal with emergencies bigger than a Brigade could meet, a proportion of transport was earmarked with the stores ready made up into loads for any situation likely to arise.

A mobile reserve like this can save carrying parties, avoids the danger of loss of a dump through shell fire and is economical.

The small dumps for emergency in battle each contained

Grenades S. O. S.	...	12 Boxes.	} Under one Pioneer officer as O. C. Dump, with one N. C. O. and 3 O. R. per Dump.
" No. 5	...	10 "	
" No 35	...	10 "	
Flares, ground	...	6 "	
T. M. C.	...	300 Rounds complete.	
P. bombs	...	100	
Barbed wire coils	...	250 small.	
Screw stakes	...	300	
Sandbags	...	5000	
Shovels	...	100	
Picks	...	50	
Wire Cutters	...	20	
Petrol tins of water	...	50	
Tape	...	20 rolls.	
S. A. A. M. G.	...	30 boxes.	
S. A. A. (bandolier packed)	...	20 "	
Machine Gun, complete	...	1 "	
Lewis Gun, complete	...	1 "	

Water Supply.—Water supply arrangements always require co-ordinating and organising. (F. S. Regs. II.-51. (3)-(4). sect. 60 (2)-(3) & 163 (9).

It may be taken for certain that normal civilian supplies will always have to be enlarged to meet the demands of troops and where local supplies are merely wells, they will be insufficient.

In this case drinking water was the first need, both in the lines and behind.

Horse water could be obtained from the canals and horsed units had been accommodated near them.

Two arrangements were made to meet the drinking water requirements.

- (a). Two sterilizing lorries were obtained from the Army.
- (b). Water tank trains were provided on the railway

The sterilizing lorries were placed originally at THIENNES Station and HOULERON—both were shelled, but though the latter had to be moved back to the PONT DE THIENNES the former remained to the end, although its work was occasionally interrupted. These lorries provided chlorinated water to the units water carts. Water cart refilling points were opened beside them and necessary tracks made.

A spur on the railway was also put in and the water train, at first only 2-150 gallon tanks on two trucks, run alongside the lorry.

In the wood, splinter proofed tanks were placed at MEREDITH and CASA DUSS for the left and right sectors of the line. These were kept full. Afterwards the tanks were increased in number and by the arrival of the warm weather in May and June there were 3 tank water points in the wood, each of 800 gallons. The trains kept these filled and thus reduced the amount of water required to be sent up with rations. In fact, when certain Brigades were in the line, hot tea or "lemonade" only were sent with the rations, any water required being drawn from the water points.

Organisation of a Divisional Area.

The water trains preceded the evening ration trains on the railway.

As horsed units were near water, units were left to organise their own watering arrangements, though of course the Divisional Staff frequently inspected during watering hours to see all was working properly.

Sterilising lorries, where available, should always be used, and Divisional "water cart filling points" each with a time table shewing hours units will fill is well worth the extra trouble required in arrangement.

This system ensures economy and purity of the water supply.

Evacuation of wounded.—All arrangements made by the A. D. M. S. were notified to those concerned through "Q" administrative instructions. (F. S. R.-II-67 (3).)

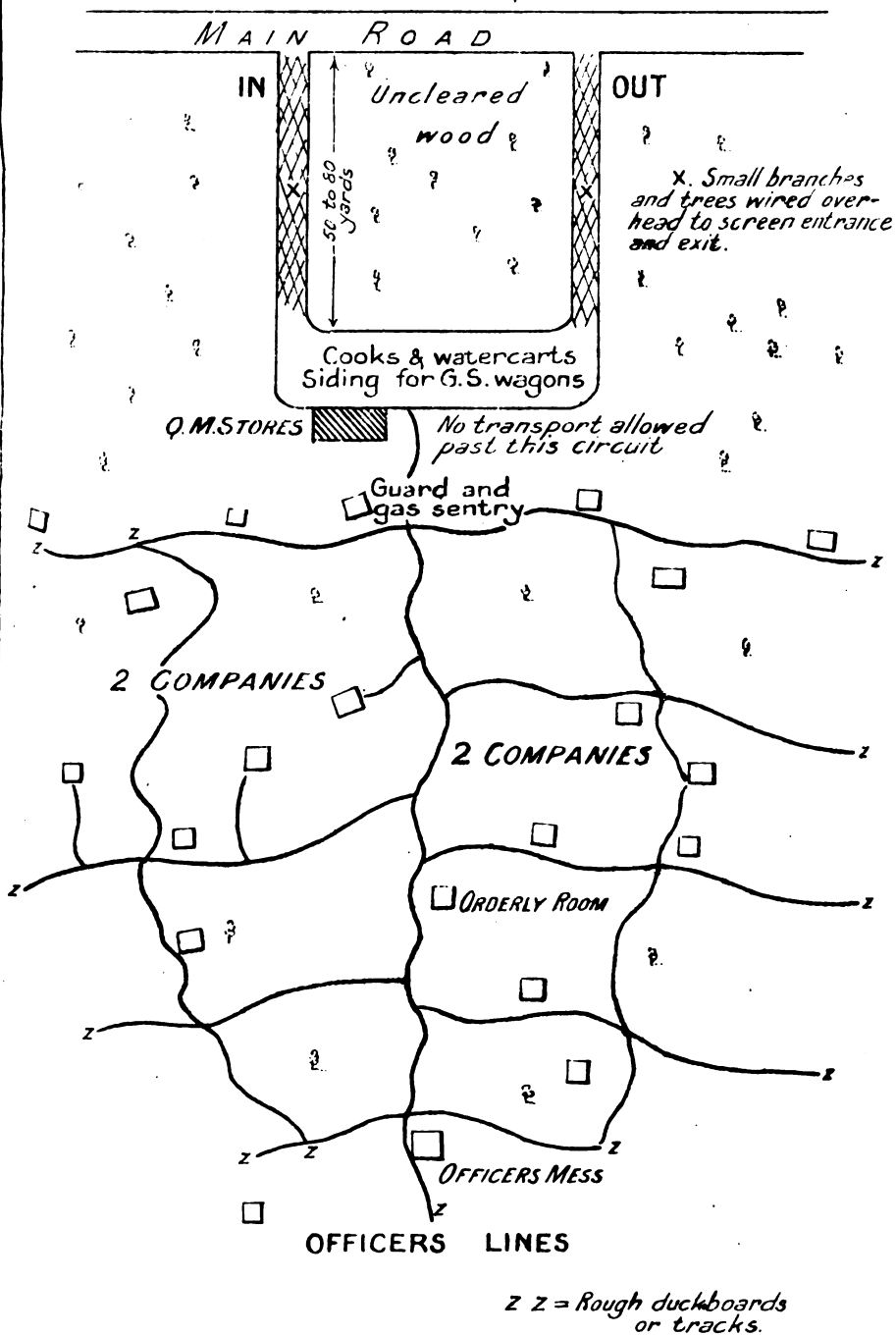
• The positions of the various posts and dressing stations are shewn on the map. One or more lorries were always placed at the disposal of the A. D. M. S. to assist in the evacuation of the walking wounded and an advanced W. W. C. P. was usually opened during operations, a soup kitchen was installed there and the horsed ambulances assisted the evacuation by carrying the worst cases amongst the "walkers" to the main W. W. C. P.

The use of the canal for evacuation from the M. D. S. has already been touched upon.

Anti-gas measures.—Hinging on and closely affecting these medical arrangements were measures taken to prevent gas casualties by the medical branch in collaboration with "Q".

A wood is always a bad area for gas, especially gasses of the "mustard type".

**CAMP PLAN WHERE COMPLETE
TRAFFIC CIRCUIT POSSIBLE.**



Efforts were made to combat this by two methods which at that time were unusual:—

(a) By *special* Gas Police.

(b) By prophylactic methods.

As a result of a visit to another Corps which had suffered heavily from gas, "Q" had obtained information as to conditions which the Division through its winter in Italy had not grasped.

A medical police post with the powers of military police was maintained at the western end of the VIA ROMA, near EDITH, the A. D. S.

This post, in addition to warning passers by and controlling traffic as regards lately gassed localities, whether gas masks must be put on, &c., was also responsible for marking down and treating with chloride of lime any gas shell craters near or on the main track. This personnel was found from the Ambulance operating the A. D. S. and did most satisfactory work.

The prophylactic measures consisted of maintaining in every trench and post petrol tins of bicarbonate solution. All ranks were drilled into gargling and washing their eyes and faces with this solution whenever exposed to gas and especially those who had to move much about in the wood, where by reason of other smells one might overlook the mustard gas.

Whether medically sound or not, this had a marked effect and soon became popular amongst the men who implicitly believed that it had enormous effect, as they could feel how it relieved their eyes when affected and credited it with even more good than that.

50 spare suits of S. D. Clothing were also maintained at the M. D. S., and W. W. C. P. for replacement of gassed clothing and similarly batteries and units in areas particularly exposed to gas were also allowed spare clothing to enable men

Organisation of a Divisional Area.

The water trains preceded the evening ration trains on the railway.

As horsed units were near water, units were left to organise their own watering arrangements, though of course the Divisional Staff frequently inspected during watering hours to see all was working properly.

Sterilising lorries, where available, should always be used, and Divisional "water cart filling points" each with a timetable shewing hours units will fill is well worth the extra trouble required in arrangement.

This system ensures economy and purity of the water supply.

Evacuation of wounded.—All arrangements made by the A. D. M. S. were notified to those concerned through "Q" administrative instructions. (F. S. R.-II-67 (3).)

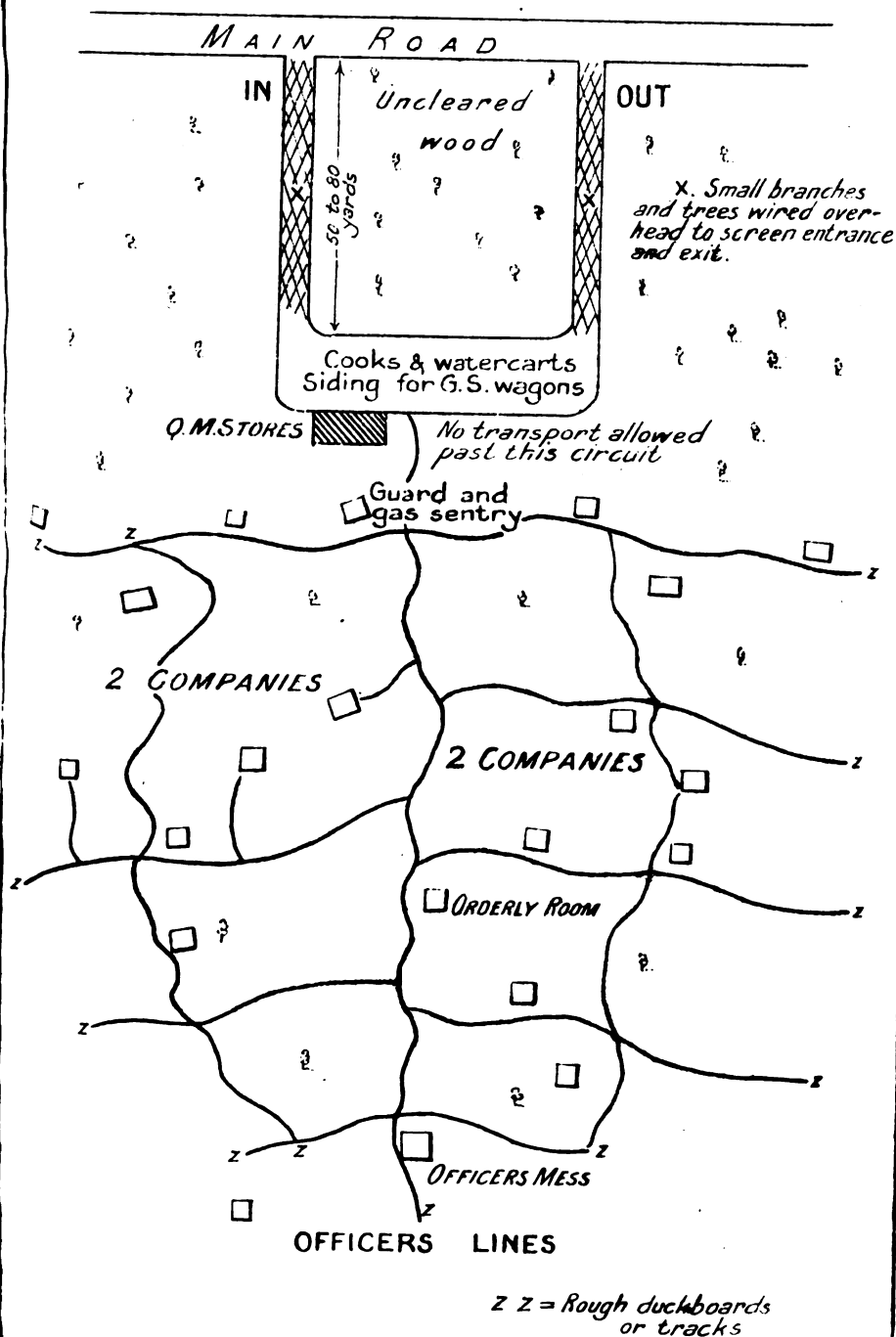
• The positions of the various posts and dressing stations are shewn on the map. One or more lorries were always placed at the disposal of the A. D. M. S. to assist in the evacuation of the walking wounded and an advanced W. W. C. P. was usually opened during operations, a soup kitchen was installed there and the horsed ambulances assisted the evacuation by carrying the worst cases amongst the "walkers" to the main W. W. C. P.

The use of the canal for evacuation from the M. D. S. has already been touched upon.

Anti-gas measures.—Hinging on and closely affecting these medical arrangements were measures taken to prevent gas casualties by the medical branch in collaboration with "Q".

A wood is always a bad area for gas, especially gasses of the "mustard type".

**CAMP PLAN WHERE COMPLETE
TRAFFIC CIRCUIT POSSIBLE.**



Efforts were made to combat this by two methods which at that time were unusual:—

(a) By *special* Gas Police.

(b) By prophylactic methods.

As a result of a visit to another Corps which had suffered heavily from gas, "Q" had obtained information as to conditions which the Division through its winter in Italy had not grasped.

A medical police post with the powers of military police was maintained at the western end of the VIA ROMA, near EDITH, the A. D. S.

This post, in addition to warning passers by and controlling traffic as regards lately gassed localities, whether gas masks must be put on, &c., was also responsible for marking down and treating with chloride of lime any gas shell craters near or on the main track. This personnel was found from the Ambulance operating the A. D. S. and did most satisfactory work.

The prophylactic measures consisted of maintaining in every trench and post petrol tins of bicarbonate solution. All ranks were drilled into gargling and washing their eyes and faces with this solution whenever exposed to gas and especially those who had to move much about in the wood, where by reason of other smells one might overlook the mustard gas.

Whether medically sound or not, this had a marked effect and soon became popular amongst the men who implicitly believed that it had enormous effect, as they could feel how it relieved their eyes when affected and credited it with even more good than that.

50 spare suits of S. D. Clothing were also maintained at the M. D. S., and W. W. C. P. for replacement of gassed clothing and similarly batteries and units in areas particularly exposed to gas were also allowed spare clothing to enable men

Organisation of a Divisional Area.

who had been sprinkled or had rubbed against gassed undergrowth to change at once. This undoubtedly reduced the number of gas casualties.

Special arrangements were made by the Gas Officer and the A. D. M. S. for the subsequent cleansing of gassed clothing before it was re-issued or sent to salvage.

Baths—Laundry and provision of clean clothing.—F. S.-Regs. II.-51. (9). Clean clothing was obtained from the Corps and latterly the Army laundry. This was issued at the baths in exchange for the dirty clothing.

The Brigade out of the line always had baths and a change of clothing and in June Divisional baths were opened at ARCADE and THIENNES to enable the units in the wood and at THIENNES to get hot baths locally, clothing in this case being issued and returned through the Quartermasters. Delousing of course was a difficulty, but by the time the baths had opened much had been done by use of the "Bradley" delouser with each unit. The Bradley delouser was an improvised "hot case" which could deal with 10 suits every three minutes. No vermin could survive its action.

Each large unit also maintained a sock washing laundry and baths at their transport lines. Petrol tins fitted with sprays were largely employed at baths, each tin affording a bath for two men. Necessary sprays were made under unit arrangements.

Reinforcements.—The reinforcement railhead was AIRE. Here the drafts were met and conducted to the Divisional Reinforcement Camp at WITTES.

There they were given baths and remained for at least one day, if possible more. A recreation hut with newspapers was provided from Divisional funds and also a proper Officer's Mess. Games and recreation ground were available and also in the spring men were encouraged to fish in the ponds.

The concert party visited the camp periodically and officers of the Brigade out of the line could always count on a good lunch or dinner if they cared to go to the camp mess for a meal.

The camp was run to give the reinforcements a short rest, make them realise that they had returned to or just joined a good Division, raise their morale and deliver them to their units happy and untired.

On the afternoon of departure drafts were marched to the canal, embarked in barges towed by a launch and taken to HOULERON.

There a special train met them and took their kit and often themselves as well to TANNAY or THIENNES where they were in easy reach of their transport lines.

It was felt that after what had been seen of the necessary and somewhat depressing conditions at the Base, it was of the utmost importance from a morale point of view to do all that could be done to ensure that reinforcements arrived with their units in good fettle and this can best be done by rest and food in comfortable conditions at the Divisional Reinforcement Camp.

Parties going on or returning from leave also passed through the reinforcement camp, officers if they wished to, other ranks compulsorily.

Veterinary arrangements.—The Mobile Veterinary Section remained at east end of BOESEGHEN and operations did not call for the opening of an advanced Veterinary aid post formed from a detachment of this unit.

"Morale Raisers"—*Generally.*—This heading includes Canteens, Theatres and the various auxiliaries like the Y. M. C. A. and Church Army. Canteen stores were hard to come by, but the system was to have one Divisional Central Canteen for wholesale and a small canteen centrally placed for each

Organisation of a Divisional Area.

sector of the front, *i.e.* one to the North and one to the South of the wood.

A theatre was also built at THIENNES but owing to enemy activity could not be much used. Instead the Divisional Troupe—"The Whizbangs"—toured, visiting the Brigades in turn, and working hard to cheer up the troops especially during the influenza period. Y. M. C. A. and Church Army branches were encouraged to open and, in fact, one of these worked well forward in the wood and was a great boon.

As has been referred to before, theatre trains were run from the support battalions in the wood on rare occasions. After all the enemy would have something to say with the way we lived.

Agricultural Salvage.—From the economic situation it was obvious that action would be required to save as much of the crops in the area as possible and remove stores of produce both to assist in feeding the refugees and also to save rations. An officer of the Train was appointed Divisional Agricultural Salvage Officer and a certain number of G. S. baggage wagons were allotted to him for the work. He opened a "Stock Yard" for salvaged cattle near STEENBECQUE and dumps for material and produce at TANNY and TÊTE DE FLANDRE.

Inhabitants identified by the civil authorities were allowed to take their property from these places and the residue was dealt with under orders of the Corps Agricultural Officer when he was appointed later.

Units were encouraged to collect and use vegetables found in the forward area and statements of the amounts taken were ordered to be submitted to the S. S. O. to enable rations to be underdrawn accordingly. As was perhaps natural, the quantity so shown as drawn was not very great but the men's morale certainly improved with the addition of extra vegetables, so that what one failed to gain on the saving of rations was more

than made up by the increased health and morale of the troops. These arrangements only applied of course to the area cleared of inhabitants.

Cemeteries.—The disposal of the dead is always a difficult matter. Units tend to form small cemeteries wherever they are.

In this case a Divisional Cemetery was opened near the M. D. S. and all bodies were brought there for burial. This cleared the forward area of our dead though it is doubtful whether this could have been done without the railway facilities.

In conclusion it is not maintained that this example is applicable to all areas.

It is only hoped to shew how the principles laid down actually worked out in practice in one particular case, and that there is more detail required in the execution than the principle indicates.

To obtain the full knowledge of all that is required in organising any area under any conditions, not only is actual experience required but also that reflection and comparison so feelingly referred to in Field Service Regulations II, Section 3-(4).

WAZIRISTAN IN 1921.

By Lt.-Col. G. M. Routh, D. S. O.

Part I.

HISTORY AND POLICY.

[NOTE.—Properly Waziristan comprises the mountainous portions only and not the level districts of Bannu and Derajat. This article therefore deals rather with Waziristan Force Area than Waziristan only.]

Somewhere up in the tangled untidy mass of shading of the North-West corner of the map of India, the word Waziristan may be traced near Bannu and Dera Ismail Khan. This is the disturbed mountain tract which attracts a large part of the whole Indian Army, and has been a thorn in our flesh since its first occupation in 1849. It has probably cost Simla more treasure by ten times than any other District of its size.

Geography.—Geographically Waziristan is a rough parallelogram averaging 60 miles from East to West and 160 from North to South. The western half consists of the Suleiman Range gradually rising up to the ridge from five to ten thousand feet high, which forms the water shed between the Indus and the Helmund Rivers and corresponds with the Durand Line separating India from Afghanistan. This is the western boundary. On the east is the Indus. North is the watershed of the Kurram River running East and West about 30 miles north of Bannu separating Waziristan from the Kohat District. South is a zig-zag political boundary from the Durand Line running between Wana and Fort Sandeman in Baluchistan with a turn southwards to the Indus.

The western half is a rugged and inhospitable medley of ridges and ravines straggled and confused in hopeless disarray. The more inhabited portions lie well up the slope at heights of four to six thousand feet. Here are our outposts of Wana and Ladha some 15 and 20 miles respectively from the Durand Line, in the centre of the grazing district, the latter within five miles of important villages of Kaniguram and Makin.

mostly traders who, in contradistinction to the practice in the rest of India, dress much the same as the Mohammedans and are not easy to distinguish.

The Tochi and Gumal routes through Datta Khel and Wana are the only two which pierce the mountain barriers into Afghanistan. All others terminate in a *cul de sac* near Kani-guram and Makin culminating in snow blocked passes. Neither of these routes is so practicable as those North or South and, as a result, none of the great tides of conquest have chosen Waziristan for their main advance.

History.—Not even tradition sheds any useful light over the early history of Waziristan. In common with other Eastern countries the first glimmerings come with Alexander's Greek civilization about 320 B. C. although it is probable that this leader's main army actually entered India somewhat further north. In those days the country must have been far more wooded than at present, resulting in a more equable climate and rainfall, and greater population. Fire and the unrestrained and unconsidered exploitation of timber by thoughtless man gradually denuded the hills and the once fertilizing showers and humid atmosphere gave place to raging torrents bursting down the hill sides unchecked by adequate vegetation.

Chandra Gupta who consolidated the Empire made possible by Alexander's vivifying progress, took over these districts from Seleucus Nikator, to whom eventually Syria and Persia had fallen on the death of Alexander.

They were probably included in the Arachosia (Kandahar) and Gedrosia (Mekran) handed over to Chandra Gupta by treaty, presumably following on some unrecorded defeat.

The fierce storms on the bare "pat" have washed away all marks of earlier civilization, if any, but traces of pottery and other relics have been found at the foot of the hills

72°

pointing to early chains of frontier posts. It is possible that these originated under the Græco-Bactrian Empire, varying in date from Demetrius to Menander of Sagala, being part of the realm of the revolting satraps completed about 150 B. C. by the disintegration of the outlying portions of the Syrian Seleucides and the Indian Mauryas.

The Arab religious outburst of 622 A. D. and following years probably flooded these parts and one tribe, the Awans, put forward a doubtful claim to Arab ancestry, possibly a remnant of the Arab conquest of Multan by Mohammad Bin Qasim about 800 A. D.

Mahmood, the victor of Ghazni, was then the first leader of a series of Afghan invasions commencing in 1001 and recurring in the 13th and 14th centuries. They were followed by a Lodi contingent, part of those who ruled India—1450 to 1526 A. D. Next came a Jat movement from Multan way and a Baluch movement from the South.

Timur, the Lame, with his Mongol hordes passed through about 1450, and the country became shortly after a portion of the Moghal Empire. From the lack of details available presumably their frontier problems were less serious than our own, and tribute is reported to have been collected.

Nadir Shah entered Pezu with his Persians in 1738 and appears to have pacified the country much as Turks pacify Armenians. From 1747 till 1810 tribute was collected under the strong rulership of Ahmad Shah and his descendants, either by force of arms or through local chiefs.

As the Durani Empire weakened, the Darweshkhel Wazirs, working south from Afghanistan, seized the more fertile tracts and at this stage the *fait accompli* was recognised by the British.

Ranjit Singh crossed the Indus in 1823, and the Sikhs continued to harry the country at intervals and levy tribute in

the Tochi till 1838, when by treaty between the three powers Shah Shuja renounced his now shadowy hold over the district in favour of the Sikhs and British. British annexation took place in 1849, the policy being then as little interference with the tribes as possible. In 1855 the British handed over a portion of the country to the Afghans for a short period, hoping thus for coercion of the unruly factions.

From 1855 the strong personality of John Nicholson, then Deputy Commissioner, Bannu, exerted a restraining influence on raiding, and it was probably his name which kept Bannu peaceful during the Mutiny. At the time two Battalions, a Battery and a Cavalry Regiment garrisoned Dera Ismail Khan whence a movable column prevented tribal raids. From this date punitive measures culminating in the re-occupation of Wana in 1920 have been necessary at frequent intervals.

In the first Mahsud War in 1860 a single Brigade marched to Jandola where two thirds of the Force passed through the Shahur Tangi to within 20 miles of Wana, whence after reuniting at Jandola the whole Brigade continued to Kaniguram and Makin which latter was destroyed and the Force returned to Bannu down the Khaisora valley. This expedition gave no real results, although hostages were taken, fines levied and posts built at the mouths of the valleys giving ingress to the plains.

It is interesting to compare the Brigade considered sufficient in 1860 with the Division used in the Derajat operations in 1919-20 and the two strong Brigades in the expedition to Wana of last year. It is this increased effort and expenditure necessitated by the increased daring and skill of a better armed enemy which is now giving India so furiously to think. Money is scarcer in these days and each soldier takes four times as much of it.

In the next big expedition in 1881, after the Afghan war, one Brigade marched to Kaniguram from Tank *via* Shahur

Tangi and Kundiwan and the other from Bannu up the Chaisora valley. During the whole operations involving a march of nearly 200 miles by each Brigade the total casualties were only 8 killed and 24 wounded.

In 1894, owing to the interference in Waziristan by the Amir of Afghanistan, Sir Mortimer Durand escorted by a Brigade proceeded to demarcate the Frontier, while the Brigade occupied Wana. A serious night attack on the camp by the Mahsuds was followed by a successful pursuit by the Punjab Cavalry. The escort of one Brigade was now reinforced by two more, one acting from Jandola and one from Bannu. Makin and Kaniguram were occupied and punitive excursions made thence with small columns into remote valleys hitherto unvisited. In this campaign lasting about four months the casualties in action were 4 killed and 20 wounded.

Wana was occupied in 1896 after building the cantonment, also the Tochi Line, the latter at the request of the inhabitants.

As a result of further recurring troubles and fines overdue, operations with two mixed Brigades again commenced in 1901 from Bannu and Tank in four columns. This Force occupied Datta Khel and destroyed Makin.

In 1914-15 together with the rest of the Frontier, the tribesmen in Waziristan became restless, and gangs of Mahsuds roamed the Derajat in bands of 100 to 200, up to within 3 miles of D.I.K., posing as peaceful cultivators by day with rifles buried, and closing as fully organised gangs for an attack on a village as darkness fell.

The villagers of the Bannu and Derajat districts lived in fear of their lives and additional troops failed to check the depredations of these large gangs during this year.

Conditions became intolerable in 1917. It became necessary to mobilise and invade Mahsud land by the Shahur Tangi.

The Force marched up the Shahur to Barwand, operating for some two months in the neighbouring villages, and secured a so-called submission from the Mahsuds—when they stopped raiding till the next time.

From 1917 till the Afghan War in May 1919 no serious operations involving more than a Brigade were embarked on. The position of the handful of British Officers holding the various posts in the Tochi and Gumal Lines then became very precarious indeed. The Tochi Posts were ordered to be evacuated on 24th May and by some misunderstanding Datta Khel was set on fire, from which the tribesmen argued the evacuation was permanent.

Our posts on the Gumal line, Khajuri Kach, Tanai, Karab Kot and Wana were thus left in the air, and an immediate retirement was ordered which, owing to the defection of the Wazirs and Afridi elements in the South Waziristan Militia, became a desperate retreat of 80 miles on Fort Sandeman, in which only four out of the eight British Officers who started succeeded in fighting their way through alive.

The story of this gallant affair throws a vivid light on the risks inseparable from maintaining the flag in distant outposts. On 25th May Major Russell at Wana received cipher news by wire of the Tochi evacuation. Hitherto discipline had been well maintained, and the good news of our successes on the Dakka front had had a satisfactory effect. It was obvious however that this sudden permanent evacuation of the Tochi, travelling at telegraphic speed by the unexplainable process news does travel in the East, would destroy confidence in British protection and discredit even the Dakka information. Obviously Mahsud and Wazir Levies would prefer to protect individually their own homes and little reliance could be placed on Afridis.

At 7-30 p.m. on 26th May, the O. C. Wana informed the assembled Indian Officers of the new situation, but at about

9 P.M. it became evident that the instructions for ordered evacuation were not being entirely obeyed, and Major Russell went towards the keep containing the arms, ammunition and specie. He was met by shots and the keep proved to be in possession of the Waziris and Afridis. The Khattaks and Bhitannis in the Fort remained loyal and it became obvious that instant evacuation was the only hope of safety. Only eight riding camels remained available as transport, and the small desperate party marched out at 9.50 P.M.—a straggling, confused motley, swelled by followers, gradually losing fighting elements as each successive Tribal Section became convinced it was on the losing side. The five British Officers and their following marched all right reaching Toikhulla, about 25 miles, at 7 A.M.

They were met by a ragged volley from this post and the weary remnant sadly continued to Moghal Kot, another fifteen miles. They did not know then that the contingents from Tamai and Khajuri Kach were actually at hand, and quelled the incipient meeting at Toikhulla an hour or two later. The climb on to the Tesa plain in the fierce midday heat, without food or water after 30 miles marching, was an ordeal survivors are not likely to forget. Pickets had to be put out and the enemy's continuous pressure checked, and Moghal Kot was not reached till nightfall.

Pursuit had been delayed by the prospects of loot at Wana, but now the hostile Wazirs were found to be concentrating on the road to Mir Ali Khel, the next post 20 miles on. Rations were uncertain. About 300 rifles remained of whom one third were recruits and one half were trans-frontier classes who could not be relied on. Eventually the retreat was continued on 30th. The Zhob Militia picquets failed to arrive, and the advance parties sent out as picquets raced ahead of their posts. Panic followed and a wild flight commenced to Mir Ali Khel. The majority flung away their rifles, cohesion and discipline

were lost and most of those who remained loyal became a terrified rabble. Five of the now nine British Officers lost their lives on this day and two more were wounded.

Mir Ali Khel was reached at 1 P.M. and the march continued at 2 P.M. to Fort Sandeman by a circuitous route, where the diminutive remnant arrived at 4-30 A.M. on the 31st, after a retreat of 50 miles under conditions of treachery, heat and endurance which have probably been rarely equalled in the history of our occupation of India.

As soon as troops could be released from the Khyber, Waziristan was reinforced and operations commenced on the Tochi Line, Datta Khel being occupied. In December the Derajat Column of 3 Brigades was formed at Jandola and, after occupying Makin, and Kaniguram and Marobi, left a Brigade in Ladha, within five miles of these places.

In December 1920 Wana was re-occupied by two Brigades under Major General Leslie with practically no casualties. Both these lines are now held, while the tribesmen continue to make sporadic onslaughts on our communications.

1919-20.—The Derajat operations in 1919 were so important and so recent that they call for further notice. Attempts to bomb systematically the recalcitrants in Kaniguram and Makin having failed, the column under General Skeen, consisting of three mixed Brigades, debouched from Jandola on the 18th December 1919. The seriousness of the fighting may be gauged from the fact that from 27-12-19 to 27-1-21 no less than 20 actions involving at least one Brigade were fought. The first problem was to force a passage up the Takki Zam through the defile commanded by the Palosiua ridges, some five miles out of Jandola. The troops at this time were caught at a moment when many had been demobilized and battalions were full of young soldiers, and, worse still, of young and untrained officers. Many of the older types were war weary and there is no doubt that the Force to Genl. Skeen's

hand was not at first fitted to deal with such determined and well armed fighters as the Mahsuds in positions of their own choosing. With the Mahsuds were some 500 deserting Militia trained by British officers for the very operations they were now resisting, armed with serviceable rifles and ample ammunition. A new era had set in in Frontier warfare. Attempts to force a hill by the old methods with two battalions against 5000 tribesmen according to accepted methods proved sheer suicide.

The latter withheld their fire till the battalions exposed themselves and then poured in a withering, converging, well aimed fire from nearly all points of the compass. In point of fact fire strengths according to the old idea had to be exactly doubled. It was a hard test. The first few days at Palosina were prolific in regrettable incidents, but it gave the troops their baptism of fire. Several new units came up in relief and gave heartening displays of staunchness. The Air Force co-operated with unusual daring and gradually, as the younger troops began to see the cumulative force of modern weapons, especially 3·7" Mountain Howitzers and grenades, and realised the heavy casualties among the tribesmen, the Force regained its morale. Some of the later achievements above Sorarogha showed great dash and brilliance often in the very troops so uncertain of themselves a month before. The fight for the Auai Tangi which was strongly held proved a task of great difficulty. It was difficult to place picquets for the main body to fight and reach the next camp before the short daylight ebbed, and several attempts were made before success was achieved. Even then camp had to be formed in a somewhat dangerous position in the river bed. The Tangi, as the word implies, is very narrow and the steep broken ground in the vicinity gave special opportunities which suited the enemies' tactics and enabled their sudden rushes to reach points which, had they been seriously held, might have jeopardised the Force as a whole. Above Sorarogha the ground became steeper and,

although the tribesmen had by this time suffered heavy losses, they were reinforced as they neared their homes. Surprises were therefore effected by our troops in the shape of night marches by which the more difficult points were seized and the success of these movements says much for the new found fighting qualities of the force. Eventually Kaniguram was occupied and the distant valley of Baddar Toi raided without encountering opposition on the scale of the earlier battles.

After this campaign, the blockade was partly raised and many of the Mahsuds not only became friendly, but consented to work on the roads which were to open up their country. Certain tribes including the Wana Wazirs continued hostile and interfered with our convoys.

As our terms were not agreed to, the Wana expedition with Genl. Leslie's two Brigades left Jandola for Sarwekai on the 14th of November 1920. Actually opposition was not serious. The Mahsuds generally took active steps in showing their friendliness

Possibly memories of the early part of the year and rich profits from sale of produce influenced their decision, as also the display of force with seasoned troops and commanders. So it seemed to the Mahsuds, but we know better. The science and Frontier lore of the old F. F. now gives place to a new science of a new army to whom frontier fighting is merely one problem in the now wider field of war. These men of a day gone by knew the Frontier as a parson knows his bible. They knew how the Mahsuds thought and acted accordingly. We study the old traditions but the once compelling personality of the white man has to give place more and more to scientific engines of war. We now know how to reduce casualties by barrages and covering fire and how to surprise sniping parties by night marches of nimble Gurkhas. The lesson of how to meet the improved skill and rifles of the tribesmen by the greater skill and science of the white man had been learnt and the enemy know it. Henceforward their

tactics have been rather desultory raiding on small parties and convoys rather than wholesale opposition. It is true that these local affairs collectively assume some importance especially at the equinoxes when the climate is sufficiently mild for the tribesmen to remain out all night in comfort.

During March and April 1920, they pursued a definite policy which cost us 1200 camels.

Parties collected in villages such as Warza, $2\frac{1}{2}$ miles from the present location of Plaza, and waited for their opportunity for an ambush on the convoy. Picquets can not be everywhere and the Mahsuds can usually find some ravine in rifle shot of the track, whence camels may be shot and food looted.

Latterly they have taken to playing our game by attacking picquets. The attack on Fig Picquet of ten men in June by 150 men, unsuccessful though it proved, makes one realise that we have a very live enemy. Tribal rushes by night under covering fire with wire cutters and hand grenades with determined knife parties is a proposition which must be allowed for in all seriousness. Rifle grenades have also been used against us. True, the recalcitrant tribes are few, mainly the Abdullai, and have not latterly combined on a large scale, but one never knows.

Policy —The policy of the British was at first one of non-interference with the tribes. Even now only part of the country is administered. Gradually it was found that more and more supervision became necessary to control raiding and this was attempted by expeditions to portions of the country with Regulars, followed by building posts and brick towers to be held by Militia. These posts were at first placed at the points where raiders usually debouched. The Political Officers, at first supported by Regulars, built up from 1904 onwards a force of some 3000 Militia with British Officers at their disposal, who were backed up by the garrisons at Bannu and Dera Ismail Khan. In addition certain allowances were made

to the tribes for good behaviour, prevention of raids and surrender of offenders when required ; also for tribal escorts as necessary. Gradually, as occasion required, posts were occupied. Wana was occupied in 1895 at the request of the Wana Wazirs. Similarly the Tochi in 1896. In the comprehensive expedition of 1895-96 when this policy was put into effect, the British arms were shown in every remote valley in the vain hope of taming the Mahsuds. It was hoped the various posts would prove a pacifying influence and a rallying ground for Government supporters. From 1904 to 1919, they were held by Militia. Roads and communications were improved and tribal allowances augmented by sales of produce to the troops on a liberal scale. Tribesmen were to learn the value of money and acquire wants, which only civilization could give. Once taught the advantages of prosperity they were to prefer it to their present precarious existence in an infertile country by raiding their richer neighbours. These things had happened in Africa and in India, even in the adjoining Zhob and Baluchistan, why should they not happen in Waziristan?

Such was the dream picture and there is no doubt that in the fullness of time these things will happen. No doubt in time the Hon'ble Member for Makiu will make his maiden speech on female suffrage in the Indian House of Commons at Delhi. But these things are not yet and until the process has more materialised the Indian Army will have to continue to watch over the young nation in the incubator.

That the change is going on gradually is evident all over the North-West of India. In the Quetta District strategical and trade reasons compelled us to occupy up to the Durand Line and the once intractable Baluchis (albeit never so untameable as the Mahsuds) may now be considered fairly civilized. Lord Rawlinson's recent tour showed that right up to Fort Sandeman the people had realised the value of law and order to the extent of policing their own areas.

The same process continues in the Khyber, Chitral, Gilgit and Kohat, where conditions tend to become quieter.

Most of these once troubled parts turn to the Amir of Afghanistan much as medieval Europe turned to the Pope, especially those abutting on his domains such as the Wana Wazirs. Chitral and Gilgit being out of the orbit are anti-Afghan. The Mahsuds—land locked in British territory and invulnerable from Afghanistan—probably think the Amir a bore except in the matter of subscriptions.

At the same time it is only natural that Islam on the Frontier should turn to the nearest Power in Islam for guidance if they consider it pays them to do so.

The recent Afghan War has somewhat unsettled the latterly traditional friendliness the two powers found it paid to maintain. Even now the old relations are not definitely resumed. Like other wars, that of 1919 discovered the more restless spirits. Many of our old levies and militia, especially those at Wana, and even old soldiers joined the cohorts of disaffection and a large proportion gravitated to Waziristan.

It should be realised that the N.-W. Frontier represents a population of seven millions, of whom 20 per cent. probably carry arms. Unlike the old tribesmen whose jezails or matchlocks were often more dangerous to the owner than to the enemy, the great war has put them in the way of good magazine rifles. The feckless Ghazi, who in the old days of Maiwand hoped to bear down the British bayonets by sheer weight of swordsmen, has given place to a much tougher proposition. Military science is not now the monopoly of the British. Again in those days the tribesman was unsupported. Certainly no Europeans found it worth while taking their sides in these troubled regions. All this has altered. We know the success which for so long attended the efforts of the German Consul Wasmuss in South Persia during the war, and we still see the results of the cursed cult of Karl Marx insinuating its insidious propaganda into the once unchanging East.

Tempora mutantur at nos mutamur in illis. We know now that agencies near the Frontier actually exist, ostensibly for trade, whose main object is to foment disturbance; whether as a preparation for Soviet rule or for other reasons is not entirely clear, but these agencies can contribute brain and leadership as well as money and all money can buy.

When we consider the tribesman's intangible lack of transport and impedimenta, his interior lines, his great mobility and wonderful marksmanship, it must be granted that the Frontier of 1921 is no mean proposition. It is hoped that good roads, guns, armoured cars and aeroplanes will eventually solve it.

It is sometimes asked why we should not let the country fizzle in its own unrest and allocate the money spent on military occupation to more profitable uses in India. This would be a policy of weakness the results of which would be too far reaching to contemplate.

The experience of years has proved that a policy of *laissez faire* has acted to the detriment of the tax payers of the plains. Behind the hills the raiders mature their plans and descend on the peaceful villages. Pursuit and interception of these gangs is an inadequate method of dealing with them, and the safety of the trader and cultivator must be sought by holding the country from which the outrages originate. No longer must this plague spot be permitted to break out whenever the storm clouds gather on the Western horizon. Our house must be set in order and the noble savage elevated from the verge of starvation to prosperity by developing the resources of his barren country. Apart from cutting our losses on the ample treasure poured out in making roads and forts, this policy would entail either expensive defence of Bannu and Dera Ismail Khan or sacrificing these and defending the Indus Line. Defending a river is contrary to the teachings of war and history. A large force would have to be concentrated in

the dreariest, most unhealthy and infertile wastes of Northern India to repel attacks prepared at leisure beyond the river against points selected by the enemy. Barracks and Cantonnments would have to be built to replace those at present Trans-Indus and the whole problem would then recur as we found out our mistake. Besides, what would young India's new born sense of national entity think of such a consummation? Then there are such considerations as trade routes and friendly tribes, broken faith and lost prestige. In terms of the moment the wisdom of such a policy has yet to be proved.

Again certain arm chair critics suggest shutting in the tribes by a barbed wire fence at the foot of the hills, 150 miles of winding double apron fencing defended as in the Mahsud blockade of 1914 by some 26 perfectly good battalions of the Indian Army in the most unhealthy tract of the Derajat, whence even the inhabitants have fled for lack of water. Exponents of such policy would no doubt build a railway 150 miles long at £ 12,000 per mile behind the fence for supply purposes and to make a bath possible weekly. They would herd 50,000 unoffending sepoys in an area scarcely fitted to support porcupines in a policy neither offensive nor defensive, a policy in which the tribesmen themselves would probably be their on'y supporters in view of the unrivalled opportunities offered them for developing offensive measures.

To the unprejudiced mind it appears more practical to grasp the nettle firmly and dominate the inhabited tracts. Why should not the road now being made to Ladha be continued 36 miles north to the Tochi road at Datta Khel and 29 miles south to Wana? Why should we not occupy the healthier portions of Waziristan rather than the foothills or Cis-Indus zones? The Razmak district round Makin 6000 feet up is both healthy and fertile. The same applies to the Shawal valley laying behind Pir Gul, the national peak near Ladha rising to a height of 11,556 feet above the sea. The Wana plain, 5000 feet up, 30 miles by 15, could with railways

support an army corps. There is no doubt that a forward railway policy will help to solve the problem. A line has been surveyed from Tank to Diaban and thence up the valley to Fort Sandeman, so connecting with the Zhob and perhaps later to Wana. The Gumal Tangi from Murtaza to Khajuri Kach is the apparently obvious route, but would be prohibitively expensive in construction and require much tunnelling. Beyond Khajuri Kach *via* Tanai and Rogha Kot to Wana, some 23 miles, offers no difficulty. The old policy of the raiders working westwards and our retributive expeditions stretching their very temporary tentacles eastwards seems to suggest better lateral communications. The broad gauge at Kohat might without undue cost be extended to Thal and thence to Idak *via* Spinwam. From here till further extension proved desirable, a motor road through Razmak, Makin and Dwatoi to link up with that now surveyed to Ladha sounds possible to the looker on. Eventually such communications, road, rail, or both, could continue to Wana, Fort Sandeman and Quetta *via* Hindu Bagh, a strategic line offering great defensive possibilities substituting Razmak which resembles Ootacamund, and healthy uplands for the deadly fever spots now occupied. The very fact of employing the tribesmen on these works with good pay and good engineers tends to pacify the country as well as providing healthy accessible hill stations in place of the proverbially comfortless cantonments which now exist in this part of the Frontier.

As the policy in Mesopotamia is to substitute tanks and aeroplanes for battalions, so can eventual expeditions be reduced. Post guns similar to the six inch howitzers now in Ladha dominating Makin can be utilised to punish marauders instead of brigades—it is not difficult to imagine guns such as the six inch Mark XIX with 19,000 yards range being a distinct factor in policing.

There are of course other solutions, even if rather heroic. The complete occupation of the country as in Baluchistan

would at this stage prove very expensive, and involve communications built at ruinous pace. Then there is the typical German solution, a military drive, complete destruction in the sealed pattern of the locusts and the Mongol hordes and transportation of any remnants to some lonely island in the Pacific. But such things are not our English way and never have been. The upshot of it all is that a large portion of our Indian Army has to sit in Waziristan and make roads which will in due course lead to a peaceful smiling countryside where the Mahsud might lie down in friendship with the Bengalee.

The Indian Year book of 1921 has a useful statement of policy in the Independent Territories applying now especially to Waziristan.

Part II.

CONDITIONS OF LIFE.

But the main consideration from the point of view of the Indian Army is that under present conditions most of us are posted in due course to Waziristan and some of us spend our lives there. It is for these that this article is mainly written.

On the further side of the Indus is a narrow belt of country, averaging 30-40 miles before reaching the foothills signifying tribal limits. This belt contains the cities of Bannu and Dera Ismail Khan which may be considered ordinary Indian cantonments, perhaps on the small side. Kalabagh opposite Mari Indus, and Tank, both much smaller, are also in this belt. Apart from these four stations there is no place for the memsahib. Even in these stations their numbers are limited by the G. O. C. owing to lack of accommodation. Only dependents of officers on actual duty on the spot are likely to be allowed there, so that officers destined for the "Concession Area" must resign themselves to a bachelor existence.

Concession Area.—This "Concession Area" in which all Waziristan Trans-Indus except Dera Ismail Khan, Bannu, and Kalabagh are included, is so called because conditions are what is known as Field Service conditions, involving certain hardships, not to say dangers, for which this form of compensation has come to be considered suitable. The concessions mean free rations and clothing; free postage; remission of duty on parcels and drink; free fodder. Elaborate peace accounts need not be kept up. Duty free canteens are in existence.

All these little amenities do undoubtedly help to console the garrisons marooned on these inhospitable and treeless hill tops. All ranks can escape for a time the grasping scrounging grip of poverty now daily looming up in the soldier's vision more relentlessly. There is not the ever present necessity of putting one's hand in one's pocket and the ordinary man finds difficulty in acquiring expensive habits or even in spending his money at all. Assuming the Pussy-foot campaign is successful, his wife should be able to waste every bean he gets beyond a mere Rs. 50 to Rs. 100 a month, which is something even if it is giving away too much.

Outside this "Concession Area" in Bannu and Dera Ismail Khan the conditions are more like an up country station except that facilities are few, servants poor and living expensive.

Approaches.—The approach to what is now known as the "Force" but which a sanguine Government hope shortly to call a "District" in token of its pacification, is by rail only either *via* Mari Indus or Dera Ismail Khan. The 79 mile motor road from Bannu through the Kohat Pass need not be considered.

To Dera Ismail Khan.—Dera Ismail Khan is approached from Darya Khan station on the Cis-Indus Railway; at the moment there is only one train a day from each direction—north from Quetta and Multan, about 4 A.M., and south from

Pindi and Peshawar at 11 A.M.—also one from Lala Musa at 1 A.M. and one from Shershah at 4 P.M. This route is only intended to be used by dwellers in Dera Ismail Khan (D.I.K.). All others should proceed *via* Mari Indus. From Darya Khan to D. I. Khan is about 15 miles as the crow flies. The latter chooses the most comfortable method, as we shall probably realise ourselves in 1925. For the present, the lucky one who can wangle a car out of Headquarters starts off from Darya Khan in a Ford. The less lucky gets a Tonga out of the R. T. O or hires a Taxi with others. If it is winter—*i.e.* September 15 to May, depending on the water in the Indus,—the motor takes him to his door in D. I. K. Sometimes he has to get out in the sand and push, but not so often as he has to sit and swear while endless camels hold the boat bridges over the various channels. One to two hours is a fair time. In the summer the car takes one to some dismal desert spot with two or three tents known as "Point E" which is duly replaced in some drier spot if washed away. The present one is about 13 miles from Darya Khan along a track of sorts. Here will be found a motor boat large enough for a dozen with light baggage. Heavy baggage is sent off with bearer in charge to the steamer, a stern wheeler capable of making 3 trips a day with 70 tons load. The motor boat takes 1½ to 2 hours at ordinary times, hugging patches of land to avoid the current. D. I. K. is recognised by a clump of trees above which the passengers and baggage are put ashore into the waiting motors.

To Mari Indus.—The best people now-a-days arrive at Mari Indus about 5 A.M. from Pindi *via* Daud Khel and Basal or Campbellpore. There is no motor road to Mari Indus or Darya Khan nor is there any means of communication from Kalabagh onwards except by rail. Persons coming under the above category who have been in Waziristan before, turn over with a grunt when the train slows up and go to sleep again, this being laid down in *Blackwood's Magazine* as the right and

proper thing to do. Meanwhile the bearer collects spare kit and marks down not without difficulty a stray chokra or two to carry the baggage down to the steamer.

The Kalabagh-Bannu 2'-6" gauge Railway, known by irreverent subalterns as the "Khabardar-Beito Railway", really starts from Kalabagh, but in order to ensure direct loading from the broad gauge, a river steamer tows flats across, each taking 6 narrow gauge wagons, which are loaded up in Mari Indus and taken back under load. Sometimes one can get one's kit down to the steamer by this toy railway, but time being no object to the staff it is not always safe to trust to it.

From station to steamer is some 10 minutes walk, some of it through the river sand. The steamer is due to come over from Kalabagh about 6 and recross with passengers at 6-30, but these mathematical timings depend somewhat on the humour of the Indian Station Master at Kalabagh Ghat.

The view up the Indus gorge as it bursts through the salt range is a scene not to be forgotten, although many of us would gladly replace it with a few dingy, foggy street scenes in the hearing of Bow Bells. Kalabagh itself, carved out on the side of the hill, brings back Kerind on the North Persian road in 1918. Kalabagh is raided sometimes but not often, just to keep the ball rolling.

The train for Bannu leaves Kalabagh Ghat about nine and the one for Tank ten minutes later. If, as frequently happens, you are late, you get some breakfast in the railway refreshment room. If you have time you walk up along the river bank 300 yards to the Rest Camp Mess just past the big banyan tree, famous all over India, and get a better and cheaper meal.

The train is sure to be full. Bannu is about 7 hours and Tank 9. Taking warning by the nerve racking hustle of American life, the K. B. Railway has returned to the speed of our fore-fathers in the stage coach. Not that the funny old

engine does not sometimes develop a surprising rate of speed between stations, but fearful of his precious freight, the Baboo makes assurance doubly sure in the matter of line clear.

There's a fair refreshment room at Lakki Marwat where one gets lunch about two. It is difficult to understand why any one lives at Lakki. When there isn't a sand storm, there's just been one or just going to be. Here the line forks, one branch to Bannu and the other to Tank. One gets into Bannu about 4 P.M. and, failing other accommodation, goes to the Rest Camp.

The R. T. O. takes names and will probably be able to fix you a seat in a car next day to your destination, which will be either Saidgi 12 miles, Idak 32 miles or Dardoni 42 miles.

The traveller to Tank, after Lakki, passes through the Pezu pass and drops down some 800 feet, leaving Sheikh Budin, the Derajat Hill station, on the left. This is 4500 feet above the sea and consists of about 14 bungalows which can be seen from the railway on a clear day. It is not used in these troublous times, though the little breath of fresh air has saved many a man's life in the past. Water was all brought up on mules and if one was lucky enough to get enough for a cold bath in the morning, the same bath water did duty in the evening warmed up. The railway here pushes through a desolate and yawning mass of jagged rocks, *Hu Huq ka Alim*, as the Mohammedan expression goes, a land where only the great God can exist. Thomas Atkins had an appropriate definition in Mesopotamia, but that is another story.

This range culminating at Sheikh Budin is subject to terrific storms in the monsoon, where it breaks up the low moisture laden clouds blowing up the Indus Valley. At such times washouts are not exceptional, neither is it exceptional for a party of labourers and passengers to precede the train for 12 miles from Lakki onwards shovelling sand off the rails for the train to continue.

Arrived finally at Tank, one proceeds to the Rest Camp. Here again is one of those excellent institutions run by the Inspector of Messes where for some nominal sum (Re. 1 to Re. 1-8 a day in the concession area and Re. 1 a day table money) one can obtain quite good meals. It is not now necessary to look sadly and hungrily round for a friend who will take you into his mess and feed you. The rail goes on from Tank another 26 miles to Khirgi, but this portion is not yet open for passenger traffic. Officers now travel on Ford vans specially provided for the purpose taking about two hours to Jaudola. The road goes through Kaur Bridge (9 miles) where one portion turns to the right up the Manzai ridge. The road straight on goes to Murtaza. It once crossed the Gumal over a girder bridge which was washed away in 1909. Rebuilding commenced but has been now abandoned and with it the partly completed ekka road to Wana. This ekka road when in repair should be passable for Ford cars the whole distance, but actually never has been. The difficulty lies in picqueting the Gumal track, involving 17 miles of narrow gorge. This is the route a railway would adopt, but ordinary pack transport from Murtaza to Wana previous to 1919 used to follow the Guzma Route over the hills practically direct to Sarwekai, saving several miles.

Our road continues up the ridge to Manzai (13 miles) and Khirgi (5 miles). Now we see signs of enemy activity in the shape of the Fort at Kaur Bridge and parties of sepoy with Lewis Guns in Ford vans patrolling the road, for tribesmen have a special delight in ambushing up these nullahs and making themselves unpleasant.

Manzai is a perimeter camp with a few buildings, a Brigade headquarters where officers should report. It will tend to become smaller as the railhead is developed at Khirgi, where most of the M. T. will go.

Khirgi has a Rest Camp, but any one desiring to push

on had better discover whether the road is still closed at 1-15 P.M. and get on to Jandola.

Jandola, 7 miles on, is the junction where the Wana line commences. Motors can continue along the Ladha line to Kotkai and even to Sorarogha and Ladha, but special reasons are necessary and one usually proceeds from here by riding mule obtained from the Post Transport Officer.

If one is lucky it is possible sometimes to borrow ponies from a Field Ambulance. It is as well to find out here which days the road is closed—for picquets don't all go out every day,—and, if open, whether any sniping is going on which would make it worth waiting a while.

By the way, once across the Indus officers are supposed to carry revolvers which can be obtained from the Officers' Shop here established in the Ordnance Depot as well as at Mari Indus. Let officers not think they are going to fit themselves out cheaply at these shops—prices are mostly those of Bombay firms plus a percentage.

It is usual in these hard times to travel with the convoys which start about an hour after daylight. You start about an hour later and catch it up in time to get through at once when the down convoy escort meets the up one and reports all clear. There are one or two little corners where snipers have a chance down valleys in spite of the picquets, and it is as well, like the maiden walking with a man in the woods, to keep moving in such places.

On the Ladha line the stages are Kotkai (9 M), Sorarogha (9 M), Piazza (9½ M), Ladha (5 M). But if going through to Ladha one can usually give Kotkai and Piazza a miss, staying the night in the Rest Camp at Sorarogha. The road above Kotkai is nothing much to buck about—being stones cleared in the torrent bed. During the spare season, May to September, this road is often interrupted. Some downpour on one of

these barren hills bursts down in a wall of water anything up to 20 feet high and makes a bit of a mess of the part of the torrent bed cleared for motors. These spates are signalled from the picquets by Very lights right down the line. They travel down 6 to 9 miles an hour, sometimes completely flooding the torrent bed right up to the precipitous sides. It's a bad day for the man careless enough to get caught at such times.

Ladha Line.—Immediately above Jandola, the road crosses an excellent three span bridge on to the Palosina plain, where so much fighting took place in December 1919. Palosina Post has now been evacuated and the road wanders through steep hills and vari-coloured rocks to Kotkai, a nasty bit of country for snipers. So far, the road terminates opposite Kotkai which can be seen across the river bed on a raised plateau, but it is being continued to Sorarogha, and revetments and cuttings in the hill side can be distinguished through the Anai Tangi up to this post. The Anai Tangi is a striking natural feature where the river narrows to some 60 feet of rock, which holds up spates during the summer.

The road picquets from Jandola to Sorarogha are withdrawn every fourth day, at which times the road is closed.

Sorarogha is a comfortable camp about 4000 feet above sea level, the headquarters of the 21st Brigade, with a good Rest Camp and Mess. From here to Ladha is 15 miles—with a post at Piazza ($9\frac{1}{2}$ M). About 2 miles short of Piazza, the Mahsuds sniped the convoy at liaison point on April 23rd and bagged 338 camels, not to speak of 5 British Officers casualties. During May and June many a good officer lost his breakfast passing this point. The transaction was most encouraging to the enemy, who were given Rs. 10 for cremating the camels by the British and Rs. 15 for every camel they shot by the Haji. Heads I win, tails you lose.

From Plaza to Ladha, $5\frac{1}{2}$ miles, the track is passable by motors except in the spate season. About 2 miles up one passes Hutch picquet, from which Makin, the headquarters of the recalcitrant Abdullai, can be seen. Here also one can see Marobi—a fertile village, once the headquarters of the Mullah Powindah, the one man who has ever exercised any influence over the Mahsuds as a whole, who boasted in 1895 that he had for 28 years opposed the British and drawn their pay.

Ladha, 5500 feet, is a comfortable camp—pleasant in summer, but in winter like brass monkeys. This road from Sorarogha to Ladha is closed on alternate days.

Wana Line.—The Wana Line is 47 miles long with headquarters at Sarwekai. Every fourth day the road is closed, but even on open days, officers have to march with the convoys—one stage only per day. These stages are Haidari Kach (10 M), Sarwekai (10 M), Dargai Oba (10 M), Roghakot (10 M), Wana (7 M). Each stage has a Rest Camp with Mess.

The start from Jandola is up the Shahur river bed to Chagmalai (5 M).

Here the track, hitherto passable for motors, enters the Shahur Tangi, a narrow rocky gorge forming the stream bed, which requires some blasting before becoming possible for any wheeled traffic. It extends $2\frac{1}{2}$ miles under beetling cliffs—an eerie spot to traverse alone, where the horse's feet awake echoes from rock to rock.

There is a legend that resistance to British forces in the Shahur Tangi will prove the end of the Wana Wazirs. Be this as it may, no serious attack has ever been delivered here. Probably the truth is that plunging fire from the heights offers fewer chances than horizontal fire from a distance when the troops debouch on to the plain. Possibly also the picquets have been well posted. Yet one has a feeling of helplessness

passing this point which is not so noticeable in more dangerous portions of the road further on where one could at any rate gallop.

(Since the above was written, a party of the Abdullai, who incidentally despise the Wana Wazirs, successfully held up a convoy from caves in the narrowest part of the Shahur Tangi, killing 16 and wounding 13. They were dislodged with difficulty after considerable fighting.)

Once through the Tangi—(literally narrow place)—one debouches on to the $2\frac{1}{2}$ miles to Haidari Kach, which has seen more fighting than any other part of the route. The tribesman has an eye for country and knows when chances are in his favour. From here right away to Roghakot the country is much more open than the Ladha Line. Beyond Dargai Oba the path joins the old ekka road from Murtaza *via* Khajuri Kach and Tanai. Between Roghakot and Wana this road passes under the huge mass of Michan Baba, rising some 3000 feet out of the surrounding foot hills to a height of 6850 feet above sea level. About this point a battle took place in April. A large force of 800 Wazirs and Mahsuds attacked the convoy, developing a fire strength which made forcing the hills impossible with the troops available. Dead camels still strew the river bed that he who runs may read. This engagement proved the accuracy of the enemy's fire at ranges exceeding 1200 yards. After shooting some camels they directed their fire on any one approaching the camels under fire, with a view to capturing these camels alive. It therefore devolved upon the escort to kill our own camels, which was done with Lewis guns from much shorter ranges. The number of shots necessary, often twelve or more, made one realise the marksmanship of an enemy which could often achieve the same result in two rounds.

Wana lies on a plain at the end of this march—the walled Fort still stands. Two years ago Wana Fort was a



Part of LĀDHA Camp looking north.
PĪR GUL in the background.



garden of perfectly kept lawns and rare plants. Outside was an 8 acre enclosure containing every European fruit and vegetable except perhaps walnuts.

In January 1921 all this had become a desert. Every scrap of wood work had been carried away (and is now being sold back to us piece meal). One cannot help feeling that the Wana plain, 30 miles by 15, has a great future; 5000 feet up—excellent grazing, ample water, carried by "Karez" or underground aqueducts in every direction, it would make, given rail communication, an ideal European settlement, and sooner or later this must be realised. It is too good a spot to be given over to tribal quarrels when one considers how many less delectable spots in India are chosen for great cities.

Tochi Line.—The Tochi Valley or Bannu line has survived many of the discomforts of the Wana and Ladha Lines. It is only 42 miles long with a good motor road. The picquets are mostly permanent towers with iron water tanks and other conveniences. Saidgi and Idak have forts big enough to accommodate such British Officers as are not required in their regimental lines, in sunproof shelter.

Dardoni is a hatted cantonment for a brigade, with electric light and fans. Although the Tochi Line is not so very much further from Makiu, the centre of disaffection, than the Ladha Line, the tribesmen seem less persistent. Possibly those actually on the spot have less initiative, possibly because wheeled transport is not so vulnerable as strings of slow moving camels. Also the country is more open, cavalry action being possible in many places. As a result of these things, life generally is less strenuous. Officers can reach the broad gauge at Mari Indus in a single day, where 4 to 6 are necessary from Ladha or Wana. The Tochi Line however shares with other Frontier posts the irksome restraint of the perimeter camp. Relaxations are few. Polo is played in Dardoni and tennis courts are being gradually built, but officers cannot stroll out

in the evening with a gun for sandgrouse, the country is too unsafe and incidentally the sandgrouse are too few.

Life.—There is nothing strikingly attractive about these perimeter camps. Beyond Khirgi and Jandola which have mud forts there are at present only E. P. tents in a barbed wire enclosure. From these posts permanent picquets are sent out on to commanding points above the road—little sangars garrisoned by 10 to 20 rifles, not brick forts like the Tochi line. These are the tactical points that help to keep open the L. of C.

Besides these picquets there are road protection troops that go out when the road is open, furnishing additional protection during the passage of convoys. They secure and link up minor tactical features and dominate some of the many narrow ravines whence sudden attacks may emerge.

The natives live in villages and caves, each village with its mud towers and most with specially hollowed out caves in which they spend not, as one would guess, the summer, but the winter. One can understand that the prospects of getting a good "fug" on are not to be despised.

The tribesman's life is a struggle for existence in which his barren worthless country can never quite support him, and the balance has to be obtained by raiding and force of arms. To him this is simple logic. Yet in his own way he is industrious. Cattle and goats can be seen feeding on the old blades of brown weed which grows at long intervals. Most of the *kaches* or patches of soil near the river bed are cultivated, and one can have a good look at the "friendlies" tilling these *kaches*, probably the very same who snipe you next day from the spot where their rifles are hidden.

There's the devil to pay if you shoot a "friendly". It's simply not done. If there's an accident, the family gets compensation, but that does not end the trouble. The blood

feud continues. No money can compensate for a man with a rifle. Subsidy on such account can be the only palliation, not reckonable as income like purchase money for inferior produce or half-hearted work on roads, or allowance for good behaviour or other moneys which we throw at them to encourage this appetite for what is lawfully gained.

Kit.—Officers are not limited as regards kit at ordinary times, though liable if sent on an expedition with the regiment to be reduced to forty pounds, in which case a regimental dump for surplus kit would almost certainly be arranged. At the same time too much kit is a nuisance and a roll of bedding with camp cot and bath and a couple of suit cases ought to be sufficient for most. E. P. tents are provided for officers in Posts, so that if one decides to take the risk of bivouacking on some show where forty pound tents are necessary, one can do without this and chance to Ordnance playing up if you want one in emergency. Lamps for tents are supplied in the concession area. There is an Officers' Shop at Mati Indus and also at Jandola, where ordinary articles of equipment and camp life can usually be purchased, but the prices are far from cheap and the choice small. They are intended for officers in the Force, the idea being that incomers are already supplied. Units detailed to the Force are sent some notes on the local Ordnance beforehand, which gives an idea of what can be got.

Sports gear is worth bringing. Most camps either have or are making tennis courts. Polo is played in Kalabagh, Bannu, Dardoni, D. I. K., Tank, Jandola, Sorarogha, Ladha and Sarwekai. Hockey is played everywhere.

The climate should be borne in mind. Up to Idak, Jandola and Chagmalai on the respective lines the official 15th April to 15th October may be taken as summer conditions. In Ladha and Wana and, to a less extent, Dardoni thick wool underclothing, lots of it, great coats, leather

waist coats and poshteens are wanted in winter, which may be taken as eight months instead of six in the less elevated parts.

The best thing officers joining can do for their units is to bring them not beer, which can sometimes be got from the Canteen at a price (albeit duty free), but vegetables and fruit, which are very hard to get in the forward posts. Of course a little delicate attention in liqueur brandy or good whisky would always be appreciated too.

Mufti of course is only required in Bannu, D. I. K. and Tank, and even there is far from essential. Officers often bring sufficient for their jaunts to Murree and Kashmir on the specially sanctioned three months leave which in practice rarely exceeds two.

Climate.—The climate in Waziristan is trying. The winter, October to April 15, is bracing enough, but the summer months are probably harder to bear than in any other part of India. This was recognised by the 90 days privilege leave allowed yearly in prewar days, although the difficulty in crossing the Indus partly affected this decision.

Bannu is surrounded by irrigated land and has a steamy summer. Tank is hot—up to about 126°—and feverish withal.

D. I. K. rarely has a temperature over 120°, but the flooded Indus running close by several miles wide makes this a somewhat damp heat which is very oppressive, especially the nights. Kalabagh near the river gets the effect of the snow water and is five degrees cooler than, say, Mari Indus on the high bank Cis-Indus opposite. Of these the first four have electric fans while Mari Indus has not. In the Daman, or outskirts of the hills, embracing Jandola, Idak and below, the heat is reflected from the hills and being tented except in the Fort, there is not much escaping the sun. Electric plants are being installed gradually. Above this belt, nights become increasingly cool up to Ladha 5500 feet, but the sun is still hot in

the day time even in E. P. tents. Mosquito nets should be carried.

Miscellaneous.

- (1) *Maps*.—Standard sheets of the New Frontier and Punjab surveys, scale 1" to 1 mile, are available up to the foot of the tribal hills.
- (2) North-West Trans-Frontier Survey, scale 2 inches to 1 mile.
- (3) Degrees sheets 38 H. L. C. K. and P scale 4 miles to an inch (mostly combined in Map No. 3 issued in the Force) form the best map available and take in the whole area.
- (4) The Million Sheet, India and adjacent countries, scale 16 M. to 1 inch, is a good general map, sheets 38 and 39 cover the area.

The maund in Waziristan is 51 seers of 102 tolahs or 2 pounds each.

The kos may be taken as in India for the fifth part of a manzil or day's march, which is less in hilly districts. The mil or English mile is understood by those who deal with Europeans.

Details of Tribes, local terms, posts, resources and administration may be obtained (although somewhat out of date) from the various Field notes on Waziristan available in all Military Libraries.

THE PRESENT SITUATION IN THE MIDDLE EAST AND CENTRAL ASIA.

***A Lecture delivered at Meerut and Luoknow
during November, 1921, by an officer
of the Army Headquarters Staff.***

At the present time the problem of the Middle East and Central Asia is probably one of the most complex and varying in the whole world. Here we have a collection of States, of all sizes, but all weak and in varying stages of development, over which the Soviet Government in Moscow is seeking to get control for its own sinister purposes. One is apt to look at each of these States individually, and to consider its present position without taking into account any of the outside factors which are at the present time affecting it. What I want to try and show is that Bolshevik Russia is intriguing in the whole area which covers Turkey, Trans-Caucasia, Syria, Palestine, Mesopotamia, Persia, Afghanistan and Russian Turkistan with two objects,

(1) the destruction of British prestige, and

(2) the creation of a situation which will enable them to bring about a revolution in this country. For the Bolsheviks regard India as the corner stone of our Empire and consider that if they can once cause a revolution here, India will fall away and the disruption of the Empire will naturally follow.

Before going any further there is one point of Bolshevik policy which I should like you to remember, for it underlies their whole system of fostering a revolution. I refer to the four stages of Bolshevik penetration. There is firstly the exploitation by means of agents and propaganda of the grievances existing in the country they have singled out for attack. Secondly comes the formation of local revolutionary organizations to carry on agitation against their own Government. Thirdly the supplying of arms and money to these revolutionary bodies to enable them to raise the cry of revolt and overthrow

their Government and replace it by a Soviet. And fourthly comes the introduction of Bolshevik forces to complete the revolution and bring the country under Russian control. In all the countries where the Bolsheviks have succeeded, you can trace all of these steps distinctly.

Having created a successful revolution in their own country in 1917 the Bolsheviks at first turned their attention westward in an attempt to spread their communistic ideas in the countries of western Europe. For more than a year they clung to this object, and were then forced to admit almost entire failure. It was some time at the end of 1918 or the beginning of 1919 that they began fully to realise this failure, and they decided that they must turn their attention in the opposite direction and try to break the power of the so-called Capitalist nations by striking at them in the East. They singled out India as their main objective, and included in their plan the destruction of British prestige in the Middle East. To attain this object their first step was to bring under their control all those portions of the old Tsarist Russian Empire which had fallen away from Russia at the end of the Great War, that is to say Russian Turkistan to the east of the Caspian and the newly founded republics of Daghistau, Azarbaijan, Georgia and Armenia to the west; for in them lay suitable places for use as bases for their campaign against us in the Middle East. And when I say bases, I do not refer to military bases. The Bolshevik menace is not a military one. Its danger lies in the spreading of subtle and specious propaganda among the down-trodden and illiterate masses which exist in most Oriental countries.

Let us take their efforts in Russian Turkistan first. This province had been the scene of much fighting between the Bolsheviks and the anti-revolutionary Mensheviks throughout much of 1918 and 1919. As soon as the military position allowed, the Bolsheviks founded at Tashkent their first propaganda base for work against British prestige in the Middle

East and India. Before they could hope to achieve anything further afield they had to consolidate their position in Russian Turkistan. But the success of their first efforts at bolshevising the Musselman inhabitants, who had never been any too tolerant of Russian rule, was, as might have been expected, remarkably small. From the Bolshevik point of view however this early failure had one advantage. It opened their eyes to the fact that, if they were to succeed among the Musselmans of Central Asia and beyond and eventually get sufficient control over them to enable them to make headway in the direction of India, they must modify the communistic side of their campaign, and do all in their power to respect the feelings of the Musselman races and give them the impression that Islam and Bolshevism were wholly compatible with one another. To make good the mistakes which had alienated the whole population in Turkistan, the Soviet Government sent to Tashkent at the very end of 1919 an entirely new set of officials with strict injunctions to do all in their power to placate the local population. Some measure of success attended these men, but, though they did modify the normal Bolshevik methods to some extent, it was beyond their fanatical minds to dispense altogether with their ideas of nationalisation and confiscation.

It was however by their treatment of Bokhara more than by anything else that the Bolsheviks discounted such little success as they had achieved among the Musselmans of Central Asia. In Tsarist times there were in Russian Turkistan two Independent Khanates, Khiva and Bokhara, both bound closely to Russia by ties of interest, but still under the rule of their own monarchs. Early in 1920 the Bolsheviks had found an opportunity for upsetting the throne of Khiva and for setting up a Soviet Republic there, and they still had hopes of bending the Amir of Bokhara to their will by peaceful means. The name of the Amir was held in such high esteem in Central

Asia that the Bolsheviks feared that any action on their part against him might raise a storm about their ears which they might not be able to weather. They therefore looked about for a method of ridding themselves of him without incurring any blame or hatred. In order to achieve their end they first of all tried to bring about a revolution in the country by sending their agents into Bokhara to stir up hostility against the Amir's rule. But the Amir arrested and deported all these agents. Foiled in this attempt the Bolsheviks encouraged the formation outside Bokhara of a Bokharan Revolutionary Society, composed of Bokharan malcontents and other low class elements from other parts of Central Asia, who were willing to do anything for money. To this society the Bolsheviks supplied money and arms and assisted its members in forming regiments of their own. When the psychological moment came and they felt they were in a position to face the consequences of their action, they bade these revolutionary units cross the border into Bokhara, raise the cry of revolt, and appeal to the Bolsheviks for help. This the revolutionaries did and as soon as the Bolsheviks received their request for assistance against the Amir, Soviet troops, already concentrated for the purpose, crossed the frontier and marched on Bokhara. The Amir's army could not withstand the regular Bolshevik troops, and the Amir was forced to flee. The Bolsheviks then set up a Bokharan Soviet Republic in his place, independent in name but really under Bolshevik control. This coup which the Bolsheviks had hoped would give an impression of spontaneity, was a great blow to Bolshevik prestige in Turkistan, for hardly a man failed to realise that it was only a part of the Bolshevik system of bringing small nations under their control, and this, combined with their behaviour elsewhere in Turkistan, has rendered the position of the Bolshevik eastern propaganda base by no means secure.

It was but a short time after they had secured their hold on Tashkent that the Bolsheviks turned their attention to

Trans-Caucasia. Their first attempt was made against the Musselman Republic of Daghistan, the Government of which had never emerged from an embryonic state as a result of the inter-tribal differences of its various components. The Bolsheviks, taking to heart the lesson learnt in Turkistan, and basing their propaganda on the fiction of the close relationship between Bolshevism and Islam, soon managed to entice Daghistan into their net. Having scored this success in Daghistan the Moscow authorities proceeded to send hordes of agents to the other three Republics, Georgia, Azarbaijan and Armenia. They chose as their first objective Baku, with its large community of workmen in the oilfields. In April 1920 the revolutionary party, which they had formed there, succeeded without any great difficulty in overthrowing the Government of the Azarbaijan Republic and in setting up a Soviet Republic in its place. The Bolsheviks were firmly determined to establish their western base of propaganda in the east at Baku and therefore the first trainload of Red troops to reach Baku in support of the new Soviet Republic was accompanied by a number of Bolshevik officials experienced in Soviet methods and fully acquainted with the Soviet forward policy. With the aid of the troops these officials usurped the various offices of the Azarbaijan Government and ousted from them the local officials who had taken part in the revolution. Great was the dismay of the local revolutionaries at the turn which events had taken, but the presence of Bolshevik troops made it impossible for them to do anything but acquiesce. Worse however was to come. The usual methods of oppression which have now become known as characteristics of a Bolshevik regime were put into practice. The oilfields and other industries were nationalised; all surplus supplies were requisitioned and all control passed completely from the Azarbaijanis to the Russians. When the true state of affairs came to be realised, armed risings took place in various parts of the country, but these were suppressed with extreme ruthlessness by the Bolshevik

soldiers. The rising at Ganja, where the Bolsheviks massacred the Musselman Tartars, who had rebelled against them, literally in thousands, will go down to local history as the most disgraceful act committed by any modern conqueror, and will moreover provide a real proof, so long as Bolshevism endures, of the true sympathy of the Bolsheviks for Islam. By their repressive measures however the Bolsheviks succeeded in cowing the inhabitants and in obtaining a firm and unquestioned hold on western Trans-Caucasia.

Anxiety to bring the whole of the territories of the old Russian Empire under their domination and to secure an uninterrupted channel of communication with Turkey forced the Bolsheviks to turn eyes of hostility on the two remaining Republics of Armenia and Georgia. It so happened that towards the end of 1920 hostilities commenced between the Turks and Armenians. As was to be expected the Turks drove back the Armenians almost to their capital, but, just as the Turkish victory was almost complete, the Russian Trans-Caucasian army engineered a coup in the Armenian Soviet Government. The Turks withdrew grudgingly as far as Kars, retaining only a fraction of their conquests, while Armenia, just like Azarbaijan, was brought into a position of complete subservience to Moscow, and Georgia alone of the four Trans-Caucasian Republics retained its independence.

It looked for some time as though the Bolsheviks might leave Georgia in peace. When, however, in March 1921 it appeared to the Bolsheviks that a settlement might be reached between Turkey and the Entente, which would leave the Turks free to turn their full attention to their eastern frontier, the Bolsheviks decided to forestall the possibility of such a change of attitude on the part of the Turks, and, having picked a quarrel with the Georgians, advanced on Tiflis. The resistance of the Georgian army was soon broken, a Georgian Soviet Republic was set up and the whole country came under the control of Moscow.

Middle East and Central Asia.

With the overthrow of Georgia practically all of Trans-Caucasica and all the Russian province of Turkistan had passed once again into Russian control, and, with their first task successfully accomplished, the Bolsheviki were in a position to prosecute their designs further afield from their two newly formed bases at Baku and Tashkent.

Now we come to the second stage of Bolshevik activity, their intrigue further afield.

Starting with Turkey. Turkey as you know, as a result of the severity of the terms of the Treaty of Sevres, underwent a revolution, and a separate Nationalist Government was set up at Angora, which decided to resist the Allies to the last. This new Government had no thought of the friendships and enmities of the past. Its whole attention was centred on the Allies as their enemies of the moment. Turkey's friend of the last war was down and out for the time being; there was only Russia to whom to turn for the help which was so badly needed, unless they were to see their hopes condemned to failure from the very outset. The hereditary enmity with Russia was forgotten, and an eager response was given to the Russian offers of assistance. The Bolsheviki on their side had seen in the anti-Allied moment in Turkey a lever which they might easily be able to use for their own purposes of preventing the leading European countries from settling down to a state of peace. They therefore gladly agreed to provide the Turkish Nationalists with money and arms, and utilised the opportunity of the establishment of friendly relations with Turkey to find an entry for their propagandists into Anatolia.

The Allies entrusted the task of overthrowing this Nationalist Government to the Greeks, but the first Greek advance only strengthened the determination of the Turks and thrust them still further into the arms of Russia. This was the last thing the Allies wanted, as it strengthened the Russian pose as the supporter of Islam. The Allies then decided to change

their policy and invited the Greeks and Turks to a conference in London at which considerable modifications of the terms of the Peace Treaty were proposed to the respective delegates. The readiness of the Allies to modify the terms of the Treaty and the apparently genuine appreciation of these modifications shown by the Turkish delegates raised wide-spread hopes that the much desired rapprochement between the Turks and the Allies would be successfully realised. But these hopes were destined to be disappointed. The end of the London Conference in March last and the return of the Greek and Turkish delegates to lay its proposals before their respective Governments was the signal for a renewed offensive by the Greeks against the Turkish Nationalists. The Allies urged the Greeks to stay their hand and refused to give them any support, but the Greeks would not hold back. This offensive, which began on March 23rd, and the disappointment of the extremist section at Angora at the extent of the modifications of the Treaty offered by the Allies caused a great revulsion of feeling at Angora against the Allies, and the Bolsheviks profiting by this state of affairs pressed upon the Turkish Nationalists the need for a still closer alliance between Moscow and Angora. As a result a more far reaching agreement was entered into between the two Governments. Meanwhile the Greeks after initial successes took a bad knock in April. This success of the Turkish arms against the Greeks led the Nationalists to adopt a truculent attitude towards the Allies. And yet, in spite of this attitude, which was largely adopted to placate the Bolsheviks, upon whom the Turks were dependent for their supplies of money, arms and ammunition, it must not be thought that the Angora Government was not alive to the danger threatening them from the East. From the moment the Bolsheviks had first entered into negotiations with Turkey they had been trying to spread communistic ideas in Anatolia, and the Turks had had to take very drastic measures against their agents. But there had been a grave split among the members of the

Turkish Nationalist Assembly as to the extent to which the Bolsheviks could be made use of. Mustapha Kemal, the President of the Assembly, and his adherents mistrusted the Bolsheviks, and while quite ready to obtain money, arms or any material from them, foresaw that, if the Bolshevik was once allowed to penetrate into Turkey, he would have come to stay. Mustapha Kemal is believed to have stated in the Assembly quite recently, "You have not realised what the Bolsheviks are and what Bolshevism is: From the moment the Bolsheviks set foot in Anatolia, what happiness we have will be daily sucked to Moscow, and we shall be left a naked people: Look at Azarbaijan as an example".

This is the outlook of the one party, while the other is quite prepared to accept Bolshevik assistance in troops as well, in the belief that when the situation in the west is cleared up the Russians will go of their own accord, or, if they refuse, the Turks will be able to drive them out. This is the idea of the party which foresees a Pan-Turanian Empire stretching from the Bosphorus to China. This party was and is a strong one and assisted by the presence of a Bolshevik representative in Angora was able to make Mustapha Kemal's position very difficult. But it had not proved strong enough to defeat him. Indeed Mustapha Kemal's victory is shown by nothing more clearly than by the shutting down of the Turkish Communist Party, the deportation of its members, and at any rate in the case of its leader, his murder. He was quietly drowned. The official shutting down of the Turkish Communist Party has not however wholly scotched communism in Turkey. There are believed still to be organizations of this nature working secretly in Anatolia.

With Mustapha Kemal at the head of affairs there is reason to believe that there is a possibility still of the Allies being able to come to an agreement with the Nationalists, but the victories of the Turks over the Greeks in the March and April

fighting apparently gave the Nationalists confidence that they would in the end be able to wring from the Allies their full demands. They had some reason for this confidence; for with the assistance they had obtained from the Bolsheviks they had been able to organise out of a heterogeneous collection of ill-equipped units, a reasonably presentable army, which had been entirely successful against the Greeks. As a result they awaited the possibility of another Greek offensive with complete confidence. In spite of warnings from the Allies, the Greeks commenced their present offensive on July 10th. The object of the Turkish command at the commencement of this offensive was to neutralise the existing Greek superiority in numbers by withdrawing before them, and making them use up more and more men on guarding their lines of communication in a hostile country. The Turks drew on the Greeks to within 60 miles of Angora. In doing so they had to make large territorial sacrifices which had a most depressing effect on the Nationalists' morale. The panic which followed the arrival at Angora of the news of the fall of ESKISHEHR apparently caused a temporary revulsion of feeling in favour of the Bolsheviks and there was a clamour for the despatch of a request to the Bolsheviks for reinforcements. This clamour was strenuously opposed by Mustapha Kemal and the Turkish General Staff, and, although the Commander of the Bolshevik Armies in Trans-Caucasia used this opportunity to offer assistance in men, the moderate party was still able to keep its end up, and a message was sent to the Bolshevik Commander thanking him for his offer, but declining it for the present. This reply, however, added that, should the Turks at any time need Bolshevik help in men they would avail themselves of this offer. The Turks thus left themselves a loophole which enabled them to get Bolshevik reinforcements later on if they should need it. There can be little doubt that had the Extremists at Angora carried the day, Russia would have gained the entry she desired into Turkey. There is no need to enlarge

on the consequences of such an event. Bolshevik foreign policy is little different in principles to what Tsarist policy was, and Russia has always had her eye on Constantinople.

The Greeks having failed in their attempt to capture Angora have had to withdraw to a line covering ESKISHEHR and AFIUN KARAHISSAR and so the danger of Russian intervention in Turkey is for the present out of the question. The war remains a straight fight between Greek and Turk. The Turks, however, are hardly capable single-handed of clearing Asia Minor and Thrace of the Greeks. A stale-mate appears inevitable and this, it is to be hoped, will give the Allies the chance of intervening and deciding matters for the worn out combatants. The Bolsheviks however are trying their hardest to prevent this.

A few words now about Syria, Palestine and Mesopotamia. The Turkish Nationalists, assisted by the Bolsheviks, have continued their policy of spreading anti-Ally and Pan-Islamic propaganda as much as possible in these mandated areas. The French in Syria have had to bear the brunt of this, and in addition have been, until recently, fighting with the Nationalists on the borders of Cilicia. They have now come to an agreement with the Turks but Syria remains the most suitable place for successful propaganda, in that the people in this area are bitterly hostile to the French and their methods, and resent the fact that they are not to be allowed as yet to have a real Government of their own. In Palestine and Mesopotamia the progress made towards setting up representative governments has claimed the attention of those of the local population who take an interest in politics. Palestine however is disturbed because of the friction between the Jewish and the other elements of the population, and this has led to open outbreaks at several places. It will be remembered that the British Government proclaimed their intention to allow the foundation of a Zionist National Home in Palestine. This intention they have adhered to, and there has been an influx of Jews, including a number

of Bolsheviki and other undesirable characters, into the country. Fear of the power these people may obtain and natural resentment at this incursion of strangers into the country has led to great bitterness on the part of the Arab, Moslem and Christian communities, and it will be a matter of considerable difficulty to arrange for the adequate safeguarding of the rights of all communities to their satisfaction. It is a pity that this difficulty has arisen, for formerly in Palestine there was unusually little friction between the various communities.

Mesopotamia, in spite of the attempts of the Turkish Nationalists to create trouble in it by means of pro-Turkish and pan-Islamic propaganda, has remained quiet, partly by way of a reaction after the rebellion of last year, but chiefly owing to the feeling of expectation engendered by the proclamations announcing the election of a King of Iraq and of the coming formation of a real Arab Government. Indeed the effects of the Turkish Nationalists from without and of the pro-Turk party within the country have on the whole been small, and many of the leading Mesopotamian Arabs who had espoused the Turkish cause, and had fled their country, are now seeking to return on finding that an Arab Government is gradually coming into being. They apparently have little faith in the Provisional Government of Mesopotamia which the Turkish Nationalists have set up across the border.

The only place where Turkish efforts have succeeded in any way is in Rowanduz in Kurdistan, where the Turks have provoked local risings.

As regards the start made with the formation of an Arab Government by the setting up of a Council of Notables to run the administration under the High Commissioner. This experiment has been a great success and has resulted in the formation of what will, now that Feisul has been elected King, be made to form the basis of a real Arab administration. The

local Arab governors have on the whole started well, but several of the tribal leaders have made attempts to defy them, in order to discover to what extent British troops would be used to support the Arab Government's authority. The promptness with which any attempt at defiance has been dealt with by the troops or aeroplanes has proved a wholesome lesson to all the tribes and has made it clear to them that, though the orders are issued by an Arab administration, the British are behind them.

A good start has also been made with the raising of an Arab Army and this has made it possible to make very considerable reductions in the British garrison.

To sum up, in the mandated Arab countries the effect of Turko-Bolshevik intrigue, though it has given and still gives cause for some anxiety, has not been serious, and as every day of peace tends to strengthen the hands of their newly-constituted Governments, we may regard this part of the Middle East as the most cheering from our point of view.

From the moment that the Bolsheviks had succeeded in founding their bases at Baku and Tashkent they commenced to intrigue against Persia. Attempts were at once made to get agents and propaganda into the country, while in addition the Persians in Turkistan were deluged with propaganda and were formed into regiments for an attack on Persia. No attack materialised from this direction, but early in May 1920 the Bolsheviks made an attack with their own troops on Euzeli and a Russian force was landed there. The Persian Government protested to Moscow, but all the satisfaction they got was an assurance that the Moscow Government had given no orders for the attack, which must have been carried out by the Azarbaijan Soviet Republic, over which Moscow had no control. The Bolsheviks also got into touch with Kuchik Khan, the leader of the Persian revolutionaries, and began an advance on

Teheran. They set up a Soviet Republic in Gilan under Kuchik Khan and began to requisition all the surplus foodstuffs for despatch to Russia. This last was too much for Kuchik Khan, who threw them over, but this did not prevent the Bolsheviks from pressing on with their advance. Persian troops with British forces in support put a stop to this and the Red force had to withdraw to the vicinity of Resht. Meanwhile the Persian Government had sent a special envoy to Moscow to discuss the question of the evacuation of Russian troops from Persia. This envoy was presented on arrival at Moscow with a draft of a treaty between Russia and Persia which the Bolsheviks were ready to sign. The treaty was in itself most tempting, but there was a fly in the ointment. It stipulated that the Russians should be allowed to have a Minister in Teheran and consulates in all the large Persian towns, in fact a series of ready made propaganda centres. Following on the conclusion of this treaty the Russian Minister arrived in Teheran and at once set to work to try and oust British influence from Northern Persia by means of a violent propaganda campaign. He also secretly gave his support to the Persian rebels who were trying to advance against the capital. Nor did he omit to carry on his intrigues among the members of the Persian Parliament and the Shah's armed forces, or to subsidise the noisier section of the Persian press. As a result British influence has dwindled. And now the Russian Minister is turning his attention to Southern Persia, where British influence has for many years been the sole stabilising factor.

The South Persia Rifles, the only force which for the last five years has stood for law and order in the south, has now been disbanded and the way is open for the spread of Bolshevism right down to the borders of the Persian Gulf. Should the Bolsheviks succeed in their plans, they would not only be in a position to force on Persia a purely pro-Russian Government which would be but the prelude to a Soviet, but their influence would

have reached right up to the very borders of India, and they would be in a still better position to bring pressure to bear on the Afghans. Just as the Bolsheviks as soon as they had secured their position in Tashkent started their intrigues in Persia, so also they began similar activities in Northern Afghanistan. Before long the result of their work became apparent in a mutiny in a garrison on the Russian border, where the troops demanded higher pay, arrested their own officers and set up what were in reality miniature Soviets. This was the first thing that made the Afghans realise the true nature of their northern neighbours and it forced them to take the necessary precautions against the Bolsheviks. But fear of Russia made it impossible for them to risk a quarrel with her and to break off the negotiations for a treaty with her which had been begun at the beginning of 1920 at Kabul. The overthrow of Bokhara however came near to ending these. The news of this came as a great shock to the Afghans. Hete was the very nation which was continually declaring itself to be the upholder of Islam making a sudden and unprovoked attack on Bokhara, whose Amir was reckoned by many the chief Musselman monarch of Central Asia. If Bokhara could be treated thus, surely it would be the turn of Afghanistan next? But fear of Russia prevailed, and the negotiations resulted in September 1920 in the signing of an Afghan-Russian treaty. In this treaty the Bolsheviks did not obtain all they wanted, but they had good reason to be satisfied with themselves. They had obtained terms which allowed them, in return for a yearly sum of money and a quantity of war material, to establish in Afghanistan a number of consulates which could serve as centres for the distribution of propaganda. Moreover two of these consulates were to be on the Indian frontier and could serve the dual purpose of controlling their intrigues against Afghanistan and India.

But the events in Bokhara had made the Bolsheviks feel that they had caused the Afghans to doubt their good faith

towards Islam. The Afghans had certainly entered into a treaty with them, but then they could not afford to be on terms of unfriendliness with their neighbour on the north. Such a half-hearted affection was not to the Bolshevik liking, for their designs against India demanded an Afghanistan either definitely friendly or definitely under Bolshevik control. They therefore imported into Kabul a Turkish Mission under Djemal Pasha. In doing this they had two reasons: firstly to provide a proof of the close unity of Bolshevism and Islam, and secondly to achieve through their pseudo-Musselman Allies what they had failed to obtain themselves, that is, permission to carry on anti-British intrigue from Afghanistan and also the power to reorganise the Afghan armed forces with the object of bringing them, and eventually the whole country, under Russian control. The effect of Djemal's arrival was considerable, and the Amir entrusted him with the reorganization of the Afghan army and allowed him to start intriguing among the North-West Frontier tribes. Djemal's pan-Islamic tendencies are not wholly to the liking of the Bolsheviks, and there have been frequent causes of friction between the Bolsheviks and the Turkish Mission. It was only to be expected that a man like Djemal, out purely for his own hand and impatient of any sort of control, should fall out with his employers, but it is open to question whether in all that he did he was not merely posing as an assistant of the Bolsheviks, while all the time working towards the Turkish pan-Turanian ideal.

After their setback during their negotiations with Afghanistan the Bolsheviks are prepared to carry out their designs against India without the support of Afghanistan, and have already arranged for other lines of advance for their agents towards India. But their whole scheme includes the bringing of Afghanistan under Bolshevik control, and if the Afghans will not come to heel of their own accord, then the Bolsheviks propose to treat them as they did Bokhara. Under the guise

of diplomacy they have already introduced a number of potential propagandists into the country, while across the Turkistan border they have organised an Afghan Revolutionary Society in case its services are needed.

Against India the Bolshevik activities are just the same as those described in the various countries of the Middle East. There is already in Tashkent an Indian Revolutionary Society where Indians are trained in propaganda to cause risings in this country and are given a semi-military training to fit them to be the leaders of such risings. The Non-co-operation movement and the industrial unrest in this country are marked down by the Bolsheviks as suitable for their purposes, and there is no doubt that there is a certain amount of Bolshevik money behind part of our present troubles in India. Bolshevik plans against this country are only gradually taking shape. The Bolsheviks are not in a hurry. Do not let the fact that there is nothing visible on the surface cause you to pooh-pooh the whole menace. Remember that Lenin himself has given out that the British Empire is Russia's chief enemy and that she must be struck the hardest blow in India, her Achilles' heel.

It is not a very encouraging picture that I have tried to paint, but at the present time it does not contain many encouraging features. The Russian famine however has weakened the Bolshevik position very much. Her various misdeeds have made her unpopular in most of the countries of Central Asia. One thing is required to turn the tables in our favour, and that is the re-establishment of ourselves as the recognised supporters of Islam. If we can only settle the Turkish question satisfactorily and become once more the friend of Turkey, most of our present difficulties will, I believe, be well on the way of solution, and we may arrive at last at a real peace.

FOCH'S PLACE IN HISTORY.

Translated from the "Revue Militaire Générale" December 1920.

BY MAJOR E. M. HUTCHINSON, D.S.O., R.F.A.

*and reprinted from the "Journal of the Royal Artillery"
August 1921.*

It may seem to be somewhat rash to attempt to ascribe to Foch his place among the great masters of war when the events with which he is connected are still so recent; but it is not only by the passage of time that one gets the least distorted view of past events; to be able to see them in a true perspective one must also take into account what the future holds in store, and this for the moment is hidden from us.

Let us therefore, in the absence of anything more definite, try to form a judgment by a study of different comparisons, and let us begin by establishing Foch's place among his contemporaries. When we have ascribed him his place in the history of his own time, it will be easier to fix his position in the line of the Great Captains of War. The action of contemporaries can in fact be examined in relation to each other, because of their simultaneity; they are more familiar to us, and it is not necessary to start with any preliminary comparison of changed conditions. If it is often a delicate matter to compare two different periods, how much more difficult and confusing is our work when we are dealing with mere individuals, however great may be the reputation attached to each of them. . . . A priori, Victory places Foch in a class above the vanquished. But our investigation takes us further: Foch had assistants, rivals; he did not direct operations alone from the beginning of the campaign to the end; and when awarding the respective honours for this victory, we are prompted by a very natural sense of justice to act fairly towards all those who deserve the full measure of our praise and to whom we shall in due course pay the tribute of our gratitude.

So this task of ascribing to Foch his lawful place consists

Foch's Place in History.

firstly, in drawing a parallel between him and Petain, Joffre, and Ludendorff, and secondly in comparing him with those great leaders to whom posterity has already accorded fame.

I. Foch and his Contemporaries.

Foch and Pétain, Foch and Joffre! The three Marshals of France appointed by the Republic, who have erased from our history the dark pages of the 'Empire.' In our hearts all three occupy an equal position: they are equal in the military hierarchy, for they have been considered worthy to receive the highest dignity; they have an equal claim to the respect and veneration of all Frenchmen. This is the view of our people who are imbued with natural common sense; with a national feeling of patriotism they associate together the three great founders of our national safety. Far from differing from public opinion it is only our wish here to justify it further, and to strengthen it by laying stress on certain points.

First—Foch and Petain.

Let us carry our thoughts back to that difficult time in 1917 when General Nivelle had been relieved of his post as Commander-in-Chief of the French Armies, and it was a question of appointing his successor. The choice of the Government lay between Pétain and Foch: the former was selected, and without doubt it is to this fact that we owe our final victory

"I believe that Providence was very merciful to France," a high and well informed personality once said to us, "when Painlevé in 1917 kept Foch at the elbow of the Government in his capacity as Chief of the General Staff, and placed Pétain at the Head of the French Army. The contrary would certainly have ruined us"—

"Thus," a real believer would say, "the ways of God are unfathomable, and in order to accomplish them He makes use of those who know Him least."

Everyone knows the work which Pétain was called upon to do in 1917. Our army was threatened with dissolution as a result of our failures in the preceeding Spring and of the demoralising propaganda carried on by an unscrupulous enemy.

To prevent the spread of the evil, to restore order in the ranks, and to raise the morale, it required a Commander who understood the mentality of the soldier to its very depths, who had experienced in close touch with his men the difficult and depressing hours of the war, and who had firmly established in their sensitive hearts a reputation for kindness. A leader who was tender and considerate, but at the same time firm, and one who demanded strict obedience to the rules of justice and military duty, such were the qualities which a Commander-in-Chief of the French army at that time needed to possess.

Pétain possessed them in a more marked degree than Foch. He had devoted himself throughout his career to the interests of the piteous infantry soldier whom he loved instinctively; during the war he had shown himself anxious to avoid heavy losses, had been solicitous for their welfare, and had constantly led his men to victory. He spoke their language: his heroic words are the words of the "poilu," short, expressive, and to the point: "On les aura" (we shall get the best of them). At the outbreak of war he was in touch with them as a Commander of an Infantry Brigade; whereas Foch, already in a higher rank, could not live in the same intimate contact with the men under his command. Besides Foch started his service in the Artillery, and the trend of his mind placed him on a higher mental plane, where he was inaccessible to more humble beings; he was removed, except on rare occasions, from the domain of organisation, using the term in its strictest sense. In 1917 what was needed at the sickbed of our ailing army was an eminent physician and not a skilled surgeon.

From what has been said it will be understood why the selection spoken of above was a particularly fortunate one, and

we can appreciate the points of difference between our Marshals of 1918. Each completed what the other lacked. Without Pétain at the head of a French Army, re-organised, disciplined, well instructed, stirred by the purest patriotism and provided with all the necessary material, Foch would not have succeeded in overthrowing the Germans in 1918, even backed up by British perseverance and with the help of the growing American armies.

What matter if afterwards, Pétain, anxious to spare the troops which he had had such trouble to reorganise, *did* show in the critical moments of the fight a caution which to-day may seem to some to have been excessive! This caution at such a time was perfectly warranted. A Commander who wanted to risk all, would probably have called forth from Foch the same kind of observations as we see coming from the pen of Pétain. The tendencies of the one acted as a counterweight to those of the other. So it seems that these two Commanders, closely united in action, with qualities dissimilar, yet complementary, each had a just share in the common victory. Looking at things from different, often even from opposite, points of view, the impulses of each were counterbalanced by the character and intelligence of the other.

Secondly. Foch and Joffre.

The latter only just missed being appointed to the supreme command of the armies of the Entente, if not in title, at any rate in fact, because everyone had realised from the very first days of the campaign how important it was, if victory was to be won, to place such dissimilar armies as those of the Allies under one united command. But it was due less to indifference on the part of Joffre than to the ignorance, obstinacy, or timidity of certain Governments, that no real progress was made in this direction while he remained Commander-in-Chief of the French Armies. Indeed, it would have been very difficult for any one of the directing Staffs then in existence to acquire an effective control over the others, on account of the

methods of command in vogue. This control, if it were to be gladly accepted by those who were to serve under it, could only be accorded to the Commander of the army whose prestige over his colleagues had been acquired by the effective exercise of his own personal authority. Now at the time when Joffre was responsible for the preparations for war he had concentrated his attention on the organisation of the higher command; he had brought to perfection the German method of collective command, and from August 1914 to the end of 1916 he adhered to a strict application of the methods which had stood their test.

This fact is in itself sufficient to show the fundamental difference which existed between Joffre and Foch; while the former triumphed in the exercise of an anonymous command, it remained for the latter to re-establish the art of personal command. With the first, the General Staff assumed in importance both as regards its numbers and its functions, which was denied to it by the second. Whereas Foch conceives, prepares and draws up the plans for his operations in every detail himself, Joffre leaves this work to his Staff, and the intellectual part of the work which he reserves to himself consists solely in rejecting or approving the proposals put before him; others, who are under his direct orders, work out the various combinations, and do the thinking for him. Once he has approved the dispositions prepared for him it is as though he were the author of them himself; he accepts full and entire responsibility for them and demands their strictest execution, which he adheres to with a tenacity similar to that shown by Foch.

This confidence which Joffre shows in the superior ability of his immediate assistants is no sign that he abdicates into their hands any of his prerogatives, nor the least particle of the authority which devolves upon him. Certainly not! He remains the Chief, and all bow before him. No decision is

Foch's Place in History.

taken without his being consulted. Nothing takes place of which he is not informed. At Chantilly Joffre wanted to know everything, to give all orders, great as well as small, ranging from events of the gravest importance down to the meanest details. Feared by all, he had a kind fatherly freedom of manner which is hard to define, which made him sympathetic and liked. His fits of anger besides being frequent, were terrible, and often based on nothing at all. This man, so cold, so calm in appearance, and a little shy by nature, sometimes showed an uncontrollable violence. With all this, he was jealous of his authority even to excess, obstinate, optimistic, and imbued with a self-confidence which made the most determined shudder.

Joffre's character then presents some striking analogies to that of Foch. Where the two men deliberately part is in the effort they make in preparing their designs; whereas the one conceives them in his own brain, the other leaves them to those whom he knows to have about him, inspiring them with self-confidence, but yet not giving them too free a rein.

What shall be said about the popularity which surrounds these two Commanders? Joffre's has never been surpassed; the first of the French Generals, it was he who defeated the German army. But how much of this is real and how much artificial? To what degree is it the work of that circle of advisers which Foch never had? It is always 'Joffre' the 'grand-pere', the 'grignoteur' (the gnawer) of the Bosch, who is the object of popular veneration in many of the most remote corners of France and even more so, perhaps, abroad: one might almost say that while still living he has stepped into his legend; one wonders if Foch ever will.....

It would be interesting to draw many other comparisons between the two Marshals; their beliefs, their ideas, their feelings, etc. It is natural to want to discover everything about famous men, for this is the price of their glory. But

such a study would be premature, and would serve no useful purpose in the present case.

Finally, Foch—Ludendorff.

The influence of external environment on the Commanders we have discussed up to date may have seemed negligible, since it was the same for all of them and their actions were simultaneous.

On the contrary, a parallel between Foch and Ludendorff should, in the logical sequence of things, begin with a comparison of the different surroundings in which the character of each was moulded and shaped, if we wish to grasp with accuracy the kind of temperament possessed by these two principal rivals of the war.

As a preliminary, let us note that Foch was not opposed by Ludendorff alone, but by the duumvirate Hindenburg—Ludendorff. This idea of collectiveness in the conduct of war is so ingrained on the other side of the Rhine, that even with such an enterprising man as the first Quarter-Master General at least two Commanders were thought necessary. However the authority of Ludendorff prevailed to such a degree over that of Hindenburg—the Memoirs of both confirm this opinion—that it seems we can neglect the latter. Besides, what we know of Hindenburg's character, that of a well balanced old man, with his physical and moral faculties diminished by age and by a long military career which had already reached its term well before 1914, is not in keeping with the risk and enterprise which marked the German operations in 1918; the part which Ludendorff plays is therefore a preponderating one. When Ludendorff disappears from the scene, the high moral courage and patriotism which are Hindenburg's attributes as a soldier, reassert their influence, and he is thus able to organise the orderly retreat of the German troops after their capitulation.

•

...

[illegible]

Digitized by Google

1875

1875

1875

1875

1875

1875

1875

1875

1875

1875

1875

1875

1875

1875

1875

1875

1875

1875

1875

1875

1875

1875

1875

1875

1875

1875

1875

1875

1875

1875

1875

1875

1875

1875

1875

1875

1875

Foch's Place in History.

In any case it would be easy in a picture, which might be termed classic and suggestive, to show in what respects the temperaments of the two men differ in their origin. Foch, sprung from that French bourgeois which forms the solid middle-class of our nation, impregnated with its deep-seated virtues, endowed with wide learning, brought up in contact with liberal ideas and fertile individual tendencies, his mind widely exercised and active, and yet not distorted by his profession in which he is specialized to the highest degree ; Ludendorff, descended from the Prussian Junker class, surpassing himself in all their narrow views, his character tainted with feudalism, tied to a conception of national opinion which was behind the times, confounding the people with the caste in which he had been born, believing the army to be created for purposes of plunder, with the Sovereign at its head.

On the other hand, both have the same vivacity of mind, a wide intellectual culture founded on a deep study of history, an extraordinary capacity for work, hearts bold and full of daring, natures which compel them to action and make them greedy for responsibility, and a force of will which is the product of obstinacy and self-confidence. In short, they represent two ideas which are socially antagonistic, but they are military leaders of the highest order, and worthy to cross swords with each other.

Some clearly defined contrasts are, however, to guide each to his appointed destiny: Foch to the goal of victory, Ludendorff to the Calvary of defeat. While the French leader is imbued with a moderating sense of realities, and instinctively possesses that idea of restraint which never forsakes him, the German Commander loses himself in the clouds, whither he is led by too vivid an imagination and a persistent failure to adapt himself to realities. The war to be waged by Germany, as conceived by him, manifestly surpasses the means which he has at his disposal to bring it to a successful end. But that matters little to him ! He applies himself to this hopeless task

without being able to distinguish the possible from the impossible. With him those qualities of a military Commander which compel success, namely firmness, obstinacy, and the knowledge when to be bold and to take risks, have no counterpoise. He lacks that special 'Flair' which is so necessary for the thorough understanding of the psychology of men, armies and peoples. So he pushes to its limits a war which he would have been wiser to wage with less recklessness. Ludendorff is a mathematician, admirable at figures, but seated at his table poring over his maps, he never notices that his house is falling about his ears. This ignorance of what can and cannot be done gives him the character of a gambler; the more desperate the situation the greater the risks he takes, until the moment arrives when, stupefied by his own excesses, he loses all presence of mind and forgets even to preserve that which a nation should never compromise ; its honour !

These differences, so marked in spite of the analogies which preceded them, present the two characters in sharp antithesis. The same is true in the domain of 'technique.'

Ludendorff was certainly one of the first German leaders to understand the necessity for simultaneous attacks on the vast battle fronts : it was important to hamper the action of reserves, which on the other hand was favoured by the stabilisation of the fronts and by the enormously increased value of modern methods of transport both for men and material. It is certainly not Ludendorff who would have launched the battle of Verdun on an initial front of scarcely 5 miles. But putting this aside, how much his form of battle is stamped with the indelible German brand, and therein shows itself inferior to that of Foch.

It seems to be a sudden revelation when one follows on a large scale map the succession of events which took place during Ludendorff's offensive from the 23rd March to the 18th July, and on another map of the same size, the series of events

Foch's Place in History.

which followed on Foch's offensive. One sees in a convincing manner how different the two battles are. The first discloses a series of violent efforts made one after the other, which produced the famous pockets in the Allied line; between these pockets intervals, where the front remained motionless, and between each effort periods of almost complete inaction. There does not seem to be any co-ordinating strategic idea underlying them. After the attack on the 23rd March which brought the Germans to the gates of Amiens, what is the object of the attack in Flanders on April 1st if it is not to be a diversion of a secondary nature with a view to recommencing the battle of Amiens as soon as possible? But no, Ludendorff does not follow out his idea, and turns in May towards the region of the Aisne. In short, his actions are disconnected, in each of them one finds a fresh beginning.

On the other hand, the second map shows us in a methodical and ordered crescendo, a progressive extension of the front engaged. Here, no period of waiting follows a period of violent fighting, everything is combined and co-ordinated: the operation of to-day follows as a result of that of yesterday, it anticipates that of to-morrow. The battle progresses methodically, extending its front from day to day.

So, while Ludendorff executes a series of isolated attacks which placed one after the other form a disconnected whole, there is an idea of continuity underlying all Foch's actions; from the 1st of July to the 11th of November his pressure never slackens for a minute. These opposite aspects betray equally opposite conceptions. They are those which one finds at the base of the German and the Napoleonic art of war.

The German prepares his battle before engaging it: he launches his attack with a violence and suddenness which undoubtedly procure for him an immediate and very appreciable advantage. But once launched, he does not direct it; the

manner of its development is worked out beforehand, and the intervention of the higher command at a later stage is merely accessory and quite unforeseen; the preparation is expected to be sufficient to carry it through to the final objective; if this objective is not reached, everything has to begin again.

The effort not being prepared in depth, the battle in consequence cannot last, it quickly loses its impetus. It resembles the bursting of a storm which sometimes overwhelms all it meets, and at others scarcely moistens the dried up ground. On the other hand the French battle resembles those fine rains which begin slowly, last whole days, and without seeming to, soak you to the very skin. Ludendorff stakes his battle on the throw of the dice. Foch directs his battle prudently, distributing his forces in depth from the beginning to the end. So the Allied victory will remain for ever a French victory. It will perpetuate for the future a definite conception of war, the deep roots of which are grafted in the best and most lasting qualities of our race.

II.

Foch and the Masters of the XIX Century.

For the reasons given above, to draw a parallel between Foch, the most recent victorious commander in a war, and those victorious leaders of the distant ages as far back as antiquity, would demand a preliminary survey of a complex and detailed kind. It would in fact be a question of determining the various conditions prevailing at the time when the Commanders acted, conditions which are so difficult of comparison from one period to another. Again, the results arrived at would probably not be conclusive. Therefore, it seems we can confine ourselves to the contemporary period in which war has undergone changes in respect of the material employed but not as regards its ultimate aim.

Here we must particularize somewhat. The period in question opens with the dawn of the XIX Century, following

Foch's Place in History.

firstly, in drawing a parallel between him and Petain, Joffre, and Ludendorff, and secondly in comparing him with those great leaders to whom posterity has already accorded fame.

I. Foch and his Contemporaries.

Foch and Pétain, Foch and Joffre! The three Marshals of France appointed by the Republic, who have erased from our history the dark pages of the 'Empire.' In our hearts all three occupy an equal position: they are equal in the military hierarchy, for they have been considered worthy to receive the highest dignity; they have an equal claim to the respect and veneration of all Frenchmen. This is the view of our people who are imbued with natural common sense; with a national feeling of patriotism they associate together the three great founders of our national safety. Far from differing from public opinion it is only our wish here to justify it further, and to strengthen it by laying stress on certain points.

First—Foch and Petain.

Let us carry our thoughts back to that difficult time in 1917 when General Nivelle had been relieved of his post as Commander-in-Chief of the French Armies, and it was a question of appointing his successor. The choice of the Government lay between Pétain and Foch: the former was selected, and without doubt it is to this fact that we owe our final victory

"I believe that Providence was very merciful to France," a high and well informed personality once said to us, "when Painlevé in 1917 kept Foch at the elbow of the Government in his capacity as Chief of the General Staff, and placed Pétain at the Head of the French Army. The contrary would certainly have ruined us"—

"Thus," a real believer would say, "the ways of God are unfathomable, and in order to accomplish them He makes use of those who know Him least."

Everyone knows the work which Pétain was called upon to do in 1917. Our army was threatened with dissolution as a result of our failures in the preceeding Spring and of the demoralising propaganda carried on by an unscrupulous enemy.

To prevent the spread of the evil, to restore order in the ranks, and to raise the morale, it required a Commander who understood the mentality of the soldier to its very depths, who had experienced in close touch with his men the difficult and depressing hours of the war, and who had firmly established in their sensitive hearts a reputation for kindness. A leader who was tender and considerate, but at the same time firm, and one who demanded strict obedience to the rules of justice and military duty, such were the qualities which a Commander-in-Chief of the French army at that time needed to possess.

Pétain possessed them in a more marked degree than Foch. He had devoted himself throughout his career to the interests of the piteous infantry soldier whom he loved instinctively; during the war he had shown himself anxious to avoid heavy losses, had been solicitous for their welfare, and had constantly led his men to victory. He spoke their language: his heroic words are the words of the "poilu," short, expressive, and to the point: "On les aura" (we shall get the best of them). At the outbreak of war he was in touch with them as a Commander of an Infantry Brigade; whereas Foch, already in a higher rank, could not live in the same intimate contact with the men under his command. Besides Foch started his service in the Artillery, and the trend of his mind placed him on a higher mental plane, where he was inaccessible to more humble beings; he was removed, except on rare occasions, from the domain of organisation, using the term in its strictest sense. In 1917 what was needed at the sickbed of our ailing army was an eminent physician and not a skilled surgeon.

From what has been said it will be understood why the selection spoken of above was a particularly fortunate one, and

Foch's Place in History.

we can appreciate the points of difference between our Marshals of 1918. Each completed what the other lacked. Without Pétain at the head of a French Army, re-organised, disciplined, well instructed, stirred by the purest patriotism and provided with all the necessary material, Foch would not have succeeded in overthrowing the Germans in 1918, even backed up by British perseverance and with the help of the growing American armies.

What matter if afterwards, Pétain, anxious to spare the troops which he had had such trouble to reorganise, *did* show in the critical moments of the fight a caution which to-day may seem to some to have been excessive! This caution at such a time was perfectly warranted. A Commander who wanted to risk all, would probably have called forth from Foch the same kind of observations as we see coming from the pen of Pétain. The tendencies of the one acted as a counterweight to those of the other. So it seems that these two Commanders, closely united in action, with qualities dissimilar, yet complementary, each had a just share in the common victory. Looking at things from different, often even from opposite, points of view, the impulses of each were counterbalanced by the character and intelligence of the other.

Secondly. Foch and Joffre.

The latter only just missed being appointed to the supreme command of the armies of the Entente, if not in title, at any rate in fact, because everyone had realised from the very first days of the campaign how important it was, if victory was to be won, to place such dissimilar armies as those of the Allies under one united command. But it was due less to indifference on the part of Joffre than to the ignorance, obstinacy, or timidity of certain Governments, that no real progress was made in this direction while he remained Commander-in-Chief of the French Armies. Indeed, it would have been very difficult for any one of the directing Staffs then in existence to acquire an effective control over the others, on account of the

methods of command in vogue. This control, if it were to be gladly accepted by those who were to serve under it, could only be accorded to the Commander of the army whose prestige over his colleagues had been acquired by the effective exercise of his own personal authority. Now at the time when Joffre was responsible for the preparations for war he had concentrated his attention on the organisation of the higher command; he had brought to perfection the German method of collective command, and from August 1914 to the end of 1916 he adhered to a strict application of the methods which had stood their test.

This fact is in itself sufficient to show the fundamental difference which existed between Joffre and Foch; while the former triumphed in the exercise of an anonymous command, it remained for the latter to re-establish the art of personal command. With the first, the General Staff assumed in importance both as regards its numbers and its functions, which was denied to it by the second. Whereas Foch conceives, prepares and draws up the plans for his operations in every detail himself, Joffre leaves this work to his Staff, and the intellectual part of the work which he reserves to himself consists solely in rejecting or approving the proposals put before him; others, who are under his direct orders, work out the various combinations, and do the thinking for him. Once he has approved the dispositions prepared for him it is as though he were the author of them himself; he accepts full and entire responsibility for them and demands their strictest execution, which he adheres to with a tenacity similar to that shown by Foch.

This confidence which Joffre shows in the superior ability of his immediate assistants is no sign that he abdicates into their hands any of his prerogatives, nor the least particle of the authority which devolves upon him. Certainly not! He remains the Chief, and all bow before him. No decision is

taken without his being consulted. Nothing takes place of which he is not informed. At Chantilly Joffre wanted to know everything, to give all orders, great as well as small, ranging from events of the gravest importance down to the meanest details. Feared by all, he had a kind fatherly freedom of manner which is hard to define, which made him sympathetic and liked. His fits of anger besides being frequent, were terrible, and often based on nothing at all. This man, so cold, so calm in appearance, and a little shy by nature, sometimes showed an uncontrollable violence. With all this, he was jealous of his authority even to excess, obstinate, optimistic, and imbued with a self-confidence which made the most determined shudder.

Joffre's character then presents some striking analogies to that of Foch. Where the two men deliberately part is in the effort they make in preparing their designs; whereas the one conceives them in his own brain, the other leaves them to those whom he knows to have about him, inspiring them with self-confidence, but yet not giving them too free a rein.

What shall be said about the popularity which surrounds these two Commanders? Joffre's has never been surpassed; the first of the French Generals, it was he who defeated the German army. But how much of this is real and how much artificial? To what degree is it the work of that circle of advisers which Foch never had? It is always 'Joffre' the 'grand-pere', the 'grignoteur' (the gnawer) of the Bosch, who is the object of popular veneration in many of the most remote corners of France and even more so, perhaps, abroad: one might almost say that while still living he has stepped into his legend; one wonders if Foch ever will.....

It would be interesting to draw many other comparisons between the two Marshals; their beliefs, their ideas, their feelings, etc. It is natural to want to discover everything about famous men, for this is the price of their glory. But

such a study would be premature, and would serve no useful purpose in the present case.

Finally, Foch—Ludendorff.

The influence of external environment on the Commanders we have discussed up to date may have seemed negligible, since it was the same for all of them and their actions were simultaneous.

On the contrary, a parallel between Foch and Ludendorff should, in the logical sequence of things, begin with a comparison of the different surroundings in which the character of each was moulded and shaped. If we wish to grasp with accuracy the kind of temperament possessed by these two principal rivals of the war.

As a preliminary, let us note that Foch was not opposed by Ludendorff alone, but by the dumvirate Hindenburg—Ludendorff. This idea of collectiveness in the conduct of war is so ingrained on the other side of the Rhine, that even with such an enterprising man as the first Quarter-Master General at least two Commanders were thought necessary. However the authority of Ludendorff prevailed to such a degree over that of Hindenburg—the Memoirs of both confirm this opinion—that it seems we can neglect the latter. Besides, what we know of Hindenburg's character, that of a well balanced old man, with his physical and moral faculties diminished by age and by a long military career which had already reached its term well before 1914, is not in keeping with the risk and enterprise which marked the German operations in 1918; the part which Ludendorff plays is therefore a preponderating one. When Ludendorff disappears from the scene, the high moral courage and patriotism which are Hindenburg's attributes as a soldier, reassert their influence, and he is thus able to organise the orderly retreat of the German troops after their capitulation.

Foch's Place in History.

In any case it would be easy in a picture, which might be termed classic and suggestive, to show in what respects the temperaments of the two men differ in their origin. Foch, sprung from that French bourgeois which forms the solid middle-class of our nation, impregnated with its deepseated virtues, endowed with wide learning, brought up in contact with liberal ideas and fertile individual tendencies, his mind widely exercised and active, and yet not distorted by his profession in which he is specialized to the highest degree ; Ludendorff, descended from the Prussian Junker class, surpassing himself in all their narrow views, his character tainted with feudalism, tied to a conception of national opinion which was behind the times, confounding the people with the caste in which he had been born, believing the army to be created for purposes of plunder, with the Sovereign at its head.

On the other hand, both have the same vivacity of mind, a wide intellectual culture founded on a deep study of history, an extraordinary capacity for work, hearts bold and full of daring, natures which compel them to action and make them greedy for responsibility, and a force of will which is the product of obstinacy and self-confidence. In short, they represent two ideas which are socially antagonistic, but they are military leaders of the highest order, and worthy to cross swords with each other.

Some clearly defined contrasts are, however, to guide each to his appointed destiny: Foch to the goal of victory, Ludendorff to the Calvary of defeat. While the French leader is imbued with a moderating sense of realities, and instinctively possesses that idea of restraint which never forsakes him, the German Commander loses himself in the clouds, whither he is led by too vivid an imagination and a persistent failure to adapt himself to realities. The war to be waged by Germany, as conceived by him, manifestly surpasses the means which he has at his disposal to bring it to a successful end. But that matters little to him ! He applies himself to this hopeless task

without being able to distinguish the possible from the impossible. With him those qualities of a military Commander which compel success, namely firmness, obstinacy, and the knowledge when to be bold and to take risks, have no counterpoise. He lacks that special 'Flair' which is so necessary for the thorough understanding of the psychology of men, armies and peoples. So he pushes to its limits a war which he would have been wiser to wage with less recklessness. Ludendorff is a mathematician, admirable at figures, but seated at his table poring over his maps, he never notices that his house is falling about his ears. This ignorance of what can and cannot be done gives him the character of a gambler; the more desperate the situation the greater the risks he takes, until the moment arrives when, stupefied by his own excesses, he loses all presence of mind and forgets even to preserve that which a nation should never compromise ; its honour !

These differences, so marked in spite of the analogies which preceded them, present the two characters in sharp antithesis. The same is true in the domain of 'technique.'

Ludendorff was certainly one of the first German leaders to understand the necessity for simultaneous attacks on the vast battle fronts : it was important to hamper the action of reserves, which on the other hand was favoured by the stabilisation of the fronts and by the enormously increased value of modern methods of transport both for men and material. It is certainly not Ludendorff who would have launched the battle of Verdun on an initial front of scarcely 5 miles. But putting this aside, how much his form of battle is stamped with the indelible German brand, and therein shows itself inferior to that of Foch.

It seems to be a sudden revelation when one follows on a large scale map the succession of events which took place during Ludendorff's offensive from the 23rd March to the 18th July, and on another map of the same size, the series of events

Foch's Place in History.

which followed on Foch's offensive. One sees in a convincing manner how different the two battles are. The first discloses a series of violent efforts made one after the other, which produced the famous pockets in the Allied line; between these pockets intervals, where the front remained motionless, and between each effort periods of almost complete inaction. There does not seem to be any co-ordinating strategic idea underlying them. After the attack on the 23rd March which brought the Germans to the gates of Amiens, what is the object of the attack in Flanders on April 1st if it is not to be a diversion of a secondary nature with a view to recommencing the battle of Amiens as soon as possible? But no, Ludendorff does not follow out his idea, and turns in May towards the region of the Aisne. In short, his actions are disconnected, in each of them one finds a fresh beginning.

On the other hand, the second map shows us in a methodical and ordered crescendo, a progressive extension of the front engaged. Here, no period of waiting follows a period of violent fighting, everything is combined and co-ordinated: the operation of to-day follows as a result of that of yesterday, it anticipates that of to-morrow. The battle progresses methodically, extending its front from day to day.

So, while Ludendorff executes a series of isolated attacks which placed one after the other form a disconnected whole, there is an idea of continuity underlying all Foch's actions; from the 1st of July to the 11th of November his pressure never slackens for a minute. These opposite aspects betray equally opposite conceptions. They are those which one finds at the base of the German and the Napoleonic art of war.

The German prepares his battle before engaging it: he launches his attack with a violence and suddenness which undoubtedly procure for him an immediate and very appreciable advantage. But once launched, he does not direct it; the

manner of its development is worked out beforehand, and the intervention of the higher command at a later stage is merely accessory and quite unforeseen; the preparation is expected to be sufficient to carry it through to the final objective; if this objective is not reached, everything has to begin again.

The effort not being prepared in depth, the battle in consequence cannot last, it quickly loses its impetus. It resembles the bursting of a storm which sometimes overwhelms all it meets, and at others scarcely moistens the dried up ground. On the other hand the French battle resembles those fine rains which begin slowly, last whole days, and without seeming to, soak you to the very skin. Ludendorff stakes his battle on the throw of the dice. Foch directs his battle prudently, distributing his forces in depth from the beginning to the end. So the Allied victory will remain for ever a French victory. It will perpetuate for the future a definite conception of war, the deep roots of which are grafted in the best and most lasting qualities of our race.

II.

Foch and the Masters of the XIX Century.

For the reasons given above, to draw a parallel between Foch, the most recent victorious commander in a war, and those victorious leaders of the distant ages as far back as antiquity, would demand a preliminary survey of a complex and detailed kind. It would in fact be a question of determining the various conditions prevailing at the time when the Commanders acted, conditions which are so difficult of comparison from one period to another. Again, the results arrived at would probably not be conclusive. Therefore, it seems we can confine ourselves to the contemporary period in which war has undergone changes in respect of the material employed but not as regards its ultimate aim.

Here we must particularize somewhat. The period in question opens with the dawn of the XIX Century, following

Foch's Place in History.

directly on the social upheaval produced by the French Revolution. Conflicts of national interests replace those of dynasties, and the change in the ends to be attained produces a radical alteration in the conduct of war. Of course it was always a question of weakening the enemy, overwhelming him, forcing him to sue for peace, and the outward appearances are therefore common to all epochs. But this is a little misleading, for around this central fact we find different technical methods which vary in their degree of intensity. To quote only one example, and it is really the most striking: while the Generals commanding armies before the Revolution of 1789 seemed to make every effort to avoid a set battle, and only decided to fight one as a last resort when they had been unable to overthrow their adversary by manœuvre, marching, feints, or occupation of territory, those who found themselves at the head of nations in arms—and Napoleon I as we know was the first of these—sought to fight a decisive battle at the earliest possible moment, convinced that one such victory would win the war. So, if we confine ourselves to those military leaders who were subject to the same professional impulse, and imbued with the same ideas of the end to be achieved in war, we shall have reduced the problem to one of simple comparison between homogeneous parts, in which the principal factors seem to be the social position occupied by each of these commanders and their individual qualities.

The great victors of the XIX Century are Moltke and Napoleon, the first the pupil, the second the teacher. How does the victor of 1918 compare with them?

Chief of the Staff of an army to the organization of which he had devoted many years, and which he had fashioned to his own liking, sure of the well nigh unlimited confidence which his sovereign placed in him, and of the support on which he could count under all circumstances, Moltke was able to proceed with his preparations for war with the patience and precau-

tion which a lengthy work demands. He put the instrument forged by his care to the test in a succession of preparatory wars. He applied himself to perfecting the whole machinery of his army, and when the moment arrived he had at his disposal welltrained troops, provided with abundant material, led by officers who were well instructed and inspired with high morale and a Staff imbued with a sound uniform doctrine. It was in particular this Staff, capable of taking the place of the Commander-in-Chief on all occasions when the latter was absent or failed, which constituted a personal triumph for Moltke: later in the vanity of his glory he was to defy his hereditary enemy ever to attain to so perfect an organization.

A policy which was brutally realistic, not to mention the inherent weaknesses in the armies which were to face the Prussian army, also helped to place the greatest chance of success on the side of Moltke. He made a business of war, and in preparing for those contingencies which men most often overlook, he seemed by ingenuity and care to have reached a point where he left nothing to chance. Foeh, who has destroyed this fine military machine produced by Moltke and developed by his successors, was not placed in circumstances so eminently favourable; very far from it. Before the war he had only reached a relatively subordinate rank, and if in spite of this he was able to have any beneficial influence on the preparation for it, the effect of this was felt in far too limited a degree by the troops under his command, while his influence on the officers, and that in the intellectual sphere only, was exercised more by the prestige of his teaching than by the authority which high military position confers.

And again, not only did he not have the chance of exerting his influence in peace time on the French Army as did Moltke before 1870 on the Prussian army, but further, his intervention as Allied Commander-in-Chief occurred at a most critical moment, during the course of a battle in which he had

previously played no part, and to which only a disastrous ending seemed possible. The immediate decisions which he had to make did not allow him even the time which was strictly necessary for a thorough grasp of the situation. Is there in all history another example of a supreme command taken over in such dramatic circumstances?

It is certain that if Foch was appealed to at a moment when everything was giving way, it was because he possessed the confidence of the Governments concerned no less than of the army, and the reason for this can be traced back to his firm and vigorous action at the beginning of the war. But the semi-disgrace of 1916 had come on top of that. It is only necessary to recall the interview between Foch and Joffre at the end of the battle of the Somme—*"Vous êtes limogé; je serai limogé; nous serons tous limogés."*

In their somewhat crude realism these words express the suspicious attitude of our military leaders towards their dependence on the ruling power of that time. Moltke did not have to suffer such misgivings at any moment of his career.

There was something which absorbed Foch's attention even more at the end of March 1918. The armies of which he received the command were of different nationalities, and there existed between them neither the ties of common origin, nor the uniformity of language, nor that similarity of temperament or preparation which in 1870 bound the contingents of southern Germany to the Prussian army which was the predominating factor. Since 1914 they had remained officially independent of each other; they considered themselves as equals, and the necessary unity of direction had only been obtained up to that time by the good-natured co-operation of their respective commanders. It was just this unsatisfactory

*The exact translation of "limogé" is "stellenbosched"—Limoges was the town to which Generals were sent who were relieved of their commands at the beginning of the war.

arrangement which was the cause of our misfortunes and which Foch had to take steps to remedy; but everyone had become accustomed to it, and it was not to be given up without a struggle. What tact and what subtle diplomacy Foch was to have to display in order that those who felt the new yoke most irksome should not revolt against it!

Foch and Moltke, therefore, found themselves placed in situations during war which, taken as a whole at least, bear little resemblance to each other, and anyone who had not grasped the sound intellectual composition of the French Marshal's character would be led to conclude that these differences in their respective positions accounted for the divergent methods of command employed by the two leaders. In fact it would be said that while Moltke's authority was exercised by the agency of a collection of individuals duly prepared by him for this object, Foch found himself compelled to have recourse to his own personal ability; he had to act and command on his own initiative; in the absence of any preliminary training or selection he could not delegate to others the right to intervene in his name when dealing with armies which in their turn offered no homogeneity like those of Moltke. To reason like this would be to put a wrong interpretation on the facts. We know definitely that Foch's method of command was not the result of any improvisation, nor was it adopted under any material pressure, and if there is any coincidence it is quite a chance one.

If it were necessary, on the contrary, could we not find many similar ties between Moltke's command in 1870 and Foch's in 1918, which might have driven the French leader to rally to the methods and doctrine of the German commander? Although they were in command of armies they were indeed not situated like Frederick II or Napoleon; however great the confidence which Moltke inspired in his sovereign, there were limits within which he felt he had to keep and we must not forget that where he was concerned, Bismarck, Roon and many others gravitated in the orbit of King William. Like Moltke,

Foch did not have his hands free, and was not complete master of his decisions.

Another similarity—if Foch, in command of foreign Generals had to resort to artifices to impose his directing will, Moltke, for his part had to take into account the social rank of the Chief Commanders of his armies. Although soldiers, these princely personages could not be treated with that lack of restraint which characterises as between soldiers the relations of the senior to the subordinate. The only commander of a German army in 1870 who had not this advantage of birth, namely Steinmetz, was precisely the last figurant of the wars of Independence, and because of this, Moltke felt himself similarly tied with regard to him: we see this very clearly at the start of operations in Lorraine.

Further, it would be more exact to say that this sort of subordination to which Moltke found himself subjected, determined him to tolerate the initiative of his army commanders and even to adapt himself to their different points of view, limiting his role to “directing operations rather than to commanding, and to taking the past into account only in order to make of it the starting point for a new combination”; * he acted as though he wished to leave his eminent subordinates to gather all the laurels to be gained on the fields of battle.

With Foch these similarities result in his adopting a diametrically opposite attitude. While Moltke reveals a reserved, extremely cautious temperament, and remains an office-stool commander, Foch on the other hand shows himself under all circumstances a man of action. We are therefore led to conclude that the adoption of different creeds by these two commanders is due to a glaring disparity, both in the quality of their character and in the power of their intelligence.

* Foch “De la conduite de la guerre” pages 395 and 183.

Foch himself, better than anyone else, has shown us in his books what was lacking in Moltke's art. Forgetting that "strategic security" is exclusively the concern of the supreme command, the victor of 1870 only took "tactical security" into account, which places the "technique" of his execution on a much lower place than that of Foch. This inferiority is especially evident in the direction of a battle.

Moltke leaves this direction, which he ought to make his own concern, to the impulses of subordinates, "shows himself powerless by his personal action of infusing life into a combination which is his production, but which is incomplete in its organization."*

He commands intermittently and from day to day. The 'army' organization which he introduced in time of peace seems to him too cumbrous to handle when it comes to execution on the ground; he then pretends to forget its existence, and directs and controls himself the movements of Corps. His foresight is not sufficiently accurate for him to be able to place his subordinates on the right path early enough, and if by chance, the latter, anxious to be informed of the views of the higher command so as to regulate their own actions accordingly, dare to ask him any questions, Moltke, doubtless because he has no answer to give, envelopes himself in mystery and remains laconic. His ideas, which he communicates to the executants in short telegrams, only reach them in scraps.

What a difference we find in the open character of Foch's orders; these will remain as models of their kind, and are themselves only the confirmations of verbal directions given at interviews with his army commanders. He looks ahead as far as possible, raises himself as high as he can, indicates the nature of the operations to be undertaken, and in this manner stretches out a wonderful thread, like Ariadne, which will guide each through the maze of daily events. But he does not

* Foch. "Conduite de la guerre" page 178.

restrict himself to this rôle, he presides at the execution, he superintends, he claims for himself a share in the action. In his position as supreme commander, he always tries to keep in view two essentials which Moltke often missed. First of all, good information, and for this he avails himself of all the means of intelligence which he turns to his use with the greatest skill; secondly, the power to act, that is to say, having the time to prepare his operations, and being able to carry them out in perfect safety by bringing his units into the fight progressively, distributed in depth, and always retained in his own hands.

So Foch comes nearer to Napoleon than Moltke ever did, in spite of the wonderful profit which the latter derived from the Emperor's teachings.

It is certainly no question of belittling the reputation gained by Moltke, and Foch would be the first to be opposed to such an attitude. He appreciates him at his true worth, and to use his own words, the results which Moltke was able to achieve "have not been surpassed in history." But it must be said that this statement of the Marshal, made before the war of 1914-1918, could not longer be upheld to-day. But however that may be, let us confine ourselves to remembering with Foch that Moltke in his superiority over his adversaries, the Austrians in 1867, or the French in 1870, shows himself a sage "who places his vision on a level with his means," and "who in the realisation of his conception appeals to common sense, sound reasoning and not only to military resources."

But how far from that to the genius of Napoleon! "From the latter," says Foch, "we get quite a different idea of war, and also the impression of a stronger and more intimate union between a more powerful brain, a more energetic will, a more supple army and better planned organization."* When it is a question of Napoleon, Foch's admiration knows no bounds,

* Foch. "*Conduite de la guerre*" page 223.

the world from top to bottom, he could only think of saving the world he was accustomed to. That is why he will abandon all vain conceptions, and like those providential heroes of whom Carlyle speaks, will adhere to realities. He will always take his stand on facts and not on appearances.

Foch, remaining a man among men, will probably never have his legend, but it would be unjust that this should mar the brilliance of his name or the glory of his military renown. For in the exclusive domain of the art of war, incontestably greater than Moltke, he will remain the military commander of modern times who can be most closely compared to Napoleon, the model; he has surely approached him nearer than anyone else.

Foch's Place in History.

Secondly, in 1796, Bonaparte, 27 years old, has nothing to lose and everything to gain; in 1918 Foch is 67, and it is only the war which has kept him on the active list, a reward for the precious services he rendered in 1914. His harvest of glory, although gathered quickly and so recently is never the less already considerable, and if the year 1916 did leave a touch of bitterness on the Marshal's heart, it in no way compromised him.

Would it then not be better to leave things in that position? Is he likely to gain anything in 1918, and is he not running the risk of compromising his past achievements? Another might well have reasoned after this fashion. But the desire for action which animates Foch in 1918 is such that this old man appears to us as young and full of life as the Bonaparte of the campaign of Arcola. To get a more exact appreciation of Foch's physical and intellectual activity we ought rather to compare him to Napoleon at the end of the Empire.... the truth is the two men had not led the same strenuous life. Napoleon's powers were exhausted by the great deeds which form his dazzling *Epopée*; his shoulders were bent under the crushing weight of absolute sovereignty; the impulses which urged him on acted with tenfold force because they were personal and egoistic, and made him "master of the world but not of himself."

• What distinguishes Foch on the other hand is his great moderation; at the age when he became a supreme military commander great personal ambitions become chimerical. Further he does not place his sword at the services of a discredited Directory, but works in concert with a Government which has been firmly established for half a century, has proved itself since the beginning of the war, and by good chance is at that very moment in the hands of a real leader of the people. Sincere believer and disinterested patriot, adapted by birth to his social environment, Foch could not dream of re-building

the world from top to bottom, he could only think of saving the world he was accustomed to. That is why he will abandon all vain conceptions, and like those providential heroes of whom Carlyle speaks, will adhere to realities. He will always take his stand on facts and not on appearances.

Foch, remaining a man among men, will probably never have his legend, but it would be unjust that this should mar the brilliance of his name or the glory of his military renown. For in the exclusive domain of the art of war, incontestably greater than Moltke, he will remain the military commander of modern times who can be most closely compared to Napoleon, the model; he has surely approached him nearer than anyone else.

REVIEWS.

"The Angani Nagas".

By J. H. Hutton.

(PUBLISHED BY DIRECTION OF THE ASSAM ADMINISTRATION.)

This monograph on the Angani Nagas and their neighbouring Tribes is an interesting and exhaustive study of the life, religion and language of Naga Tribes whose old customs and traditions have not yet been completely obliterated by the process of modern civilisation.

The scope of the book is perhaps best explained by the Author's modest statement that he has attempted a task which should have been undertaken by a trained anthropologist. It is, however, open to doubt whether the book in the hands of such an author would have acquired much added value regarded purely as a scientific study, while the interest it possesses for the ordinary reader, particularly in the chapter devoted to folklore, would undoubtedly have been sacrificed.

The book is profusely illustrated and can be recommended to the attention of all whose duties or pleasure bring them in contact with the Naga Tribes.

"The Official History (Naval and Military) of the Russo-Japanese War. Vol. III."

Prepared by the Historical Section of the Committee of Imperial Defence.

(H. M. STATIONERY OFFICE &C, PRICE, WITH APPENDIX
VOLUME AND CASE OF MAPS, £3-10-0).

This third and last volume of the official history was completed in 1914, but its publication was unavoidably delayed by the great war. It is therefore a record written in the light of pre-war days, and not written up after the experience of another and very different war. To the military student it

thus affords the full value of the conclusions drawn in the first retrospect after 1904-5, and indicates the lines of military thought which prevailed before the war of 1914-18, which makes it an additionally valuable record.

It covers the period from the aftermath of the battle of the Sha Ho up to the conclusion of hostilities, including the battles of San-De-Pu, Mukden, and the naval battle of the Sea of Japan, the latter being perhaps more popularly known as Tsushima. The co-ordination of the matter of the book is of course up to the standard of a British official military history, land and sea issues are dealt with separately save where they are closely interdependent, and the commentary is almost entirely restricted to the brief chapters set apart for the purpose. The reader can thus assimilate the facts clearly, before he passes to the examination of causes, correctness, and mistakes. A rather longer chapter of comments on the siege and defence of Port Arthur is included in the volume, it pertains to the detailed history recorded in the second volume. It is of special interest, however, as much of the fighting at that point resembled the western front of 1914-18 more closely perhaps than any other actions preceding it since the Crimea. Details would be out of place in a short review, but in this chapter there is a good deal of illuminating criticism of the Russian dispositions, and it is full of practical lessons of which the parallels will certainly be found eventually in the future history of the late war.

In a military magazine, the accounts of the Naval actions deserve a special note: in that they are so written as to be perfectly intelligible to the ordinary military reader, and they are not in any way confined to technicalities of naval language and description which might possibly obscure the issues to a soldier. As a point of interest, the very many officers who must have read contemporary Russian publications such as "Rasp-lata" by Semenoff and "From Libau to Tshushima", which

were extensively circulated in English in about 1907-8, will recognise the truth and accuracy of those personal and unofficial accounts, and see how the Russian Second Pacific Squadron was something of a forlorn hope from the first inception of its venture. The Dogger Bank incident, about which so many conflicting but interesting rumours were prevalent at the time and long after, comes in for its due share of prominence; but it is interesting to note that the majority of the members of the International Commission which sat on it afterwards notify that they "lack the precise information which would enable them to identify on what objects the (Russian) ships fired".

With the license of a reviewer it is perhaps permissible to draw special attention to one aspect of the present volume: namely that a distinct attempt seems to have been made to furnish it with a greater air of interest than that commonly attributed to official histories. The literary style of the whole book is, judged by outside standards, of a much higher grade than that of certain of the older official works; there are plates and photographs in the text which, if not absolutely essential to the work in hand, contribute greatly to maintaining interest for the reader. The measure may be called one of popularisation if a puritanical standpoint is adopted, but the policy is a matter for congratulation. This volume must surely be the most "live" and attractive of official histories yet published, and consequently it is one which will attain its object; that of being widely studied, far more surely than the type of book which at times preceded it.

For the thorough military student it affords an excellent opportunity, whilst there is yet time before the appearance of a complete official history of 1914-18, of completing a study of warfare up to 1914.

"VIC".

Militar-Wochenblatt.

10TH DECEMBER 1921.

1. "*On the origin of the first note to Wilson*", by General Ludendorff.

An article written to refute Erzberger's statement in "Experiences in the World War" that Ludendorff was responsible for the first note to Wilson.

2. "*The guilt as to the Peace*". By Lt. General von Cramon.

Von Cramon was at Austrian G. H. Q. in 1918 in command of the German troops working with the Austrians and was therefore in close touch with Ludendorff. He is full of bitter complaints against the Treaty of Versailles which has reduced Germany to its present dreadful condition. The nature of the Treaty was a natural consequence of the armistice conditions, and for the latter Ludendorff had been made the scapegoat. Cramon denies his guilt and lays the blame on the shoulders of the revolution. He continues inconsequently to proclaim that never will German heroes be allowed to appear before foreign courts and utters bitter complaints against the judgments recently uttered *in contumaciam* by French courts-martial against certain German officers.

He regards Germany's acknowledgement of her guilt, which was forced upon her by brute force, as the principal cause of her sorrows, for the Allies have made it their excuse for every crime they have perpetrated against her since. But complaints he leaves to "old women of both sexes". Germany must forget all party strife, come to a united decision and, not only protest against the lie of her guilt, but demand the revision of the Treaty of Versailles so that the mark of Cain may be removed from the German brow and the nation may breathe again as a free people.

3. *Some remarks on Artillery of to-day.*

The writer complains that it is the curse of the lost war not to be able to make use of the rich experiences gained therein. He has something to say on the value and use of the Infantry gun ; on the movement of batteries in dispersed order on the battlefield ; on the advantage of the French system of having the ammunition wagon immediately behind the gun on the march ; and the value of camouflage.

4. *"The ideal tasks for a reduced army".*

"The Army and Sport", by Captain Hans Suren.

The second instalment of an article on the value of sport for an army, especially as regards the formation and strengthening of character.

The remainder of the number consists of foreign intelligence and notes of purely domestic interest.

Militar-Wochenblatt.

17TH DECEMBER 1921.

1. *The despatch of Colonel Hentsch to the front.*

The first volume of the "Investigations in the National archives and statements therefrom" has just appeared. It is a critical study made by the principal Curator of the Archives and by Lt.-Colonel Muller-Loebnitz of the various sources of information regarding the despatch of Colonel Hentsch to the front in the days from the 8th to the 10th Sept. 1914.

The tragical import of this much-discussed despatch of a representative of G. H. Q. to the different A. H. Q.'s in the middle of the Marne battle lies in its connection with the decision to retreat of the 1st and 2nd Armies.

What orders did Hentsch receive from von Moltke? What influence had he in the decision of von Bulow

to retreat? Did he exceed his powers when at A. H. Q. 1st Army? All these and other cognate matters are examined with great care and impartiality with the help of the material in the Archives. The result of the investigations made clears up these fateful events as far as appears possible either now or in the future.

Many points will always remain open to discussion : the exact wording of the instructions given to Hentsch which unfortunately was verbal and never committed by him to writing ; the events at A. H. Q. 2nd Army ; the psychological currents in von Bulow's mind and the inner motives of his decision to retreat.

It is at any rate clear that the decision was based on an unsound appreciation and that the blame lies with 2nd Army Headquarters. Hentsch was certainly wrong in not making himself quite clear on the actual situation before giving his decisive and fateful orders. In instructing A. H. Q. 1st Army to retreat he was acting within the scope of his task, but if he so affected the 1st Army H. Q. by his gloomy and overdrawn picture of the troubles of the 2nd Army that it became no longer possible to remain true to thoughts of victory and rendered the bold solution apparently hopeless (they could but view the situation of the 2nd Army through his eyes) then he should have acted otherwise even at the price of not following his instructions.

The bold solution referred to—in our opinion the only correct one—was, having beaten Manoury, to have made a general attack on the British after their passage of the Marne.

Hentsch on his return visited the 4th and 5th Army Headquarters and took credit to himself later for having prevented the retreat of the 4th Army. That this credit was earned is certain. With the 5th Army H. Q. however he played an entirely different role and tried to persuade them to retire. The Crown Prince protested against this move most strongly and only obeyed on the receipt later of an order to that effect from G. H. Q.

2. *French views on the future employment of cavalry.*

This is a translation of an article by General Bregard in a recent number of the "Revue de Cavalerie". It is interspersed however with a few notes from the German side. The French writer for instance maintains that the French could never get to grips with the German cavalry because the latter nearly always fell back at sight. The note on this is that German cavalry writers always have the same complaint against the French cavalry. Whenever, says Bregard, the opposing horsemen did meet in those early days the French, owing to their fine leadership and unquestionable moral superiority, always beat their opponents. "Hence" says the German note "the French retreat in 1914".

The article is moderate in tone. General Bregard is opponent of special schools of thought. Cavalry must act either on foot or horse, massed or dispersed, as an aid to aircraft or in lieu of them as circumstances may dictate. Energy, the will to conquer, belief in training manuals, in leaders and higher leading build the road to victory. Incidentally he remarks that there is a decay in the cavalry spirit among the younger officers.

3. *The crisis in the Italian Army, October 1917.*

This is a reply by an Austrian officer to an article in an earlier number of the magazine by General von Hofacker who suggested that, had the left wing of the 14th Army wheeled to the left after crossing the Udine, the whole of the Italian 3rd Army might have been destroyed.

4. *The voting in Odenburg.*

Criticism of the military occupation of Burgenland. By an Austrian correspondent.

The remainder of the number is taken up with questions of domestic interest—pay, pensions and appointments—and with short reviews of current periodicals.

Militar Wochenblatt.

7TH JANUARY 1922.

1. Military & Political retrospect of the year 1921.

The German army has done as well during the year as could be expected in unfavourable circumstances. It had to keep out of the Polish embroglio but was all the better for that. It wants freedom from politics to enable it to develop peacefully. It must find new ideals without forgetting the old ones. There is no great keenness shewn at present on entering the army although the ex-soldier is well looked after in civil life. This is not surprising for a nation has to get accustomed to the new circumstances of an enlisted army. Whether the experiment succeeds or whether even piratic France will eventually see that a nation's measures of defence should be left to itself only the future can shew. Eventually, however, it will be impossible to refuse to Germany what is allowed to Poland and Czecho-Slovakia. The question of the supply of officers presents no great difficulty at present, but more will be required later. They should be drawn from large families of the class that has always supplied the army with officers. Chances of promotion may not be great but quite as good as before the war. The article then leaves domestic matters for a very favourite theme—the constant friction between England and France, the chances of a war between these two Powers, the probable use of long ranging coast-guns against English towns, the probable destruction of English commerce by French U boats, and so on.

Whether such articles are written with a view to "separating very friends", or merely to draw comfort from a hopeful future is hard to say; but it is clear that, in either case, we have to deal still with an unregenerate Germany.

II. *von Bethmann Hollweg's Book*, by General Ludendorff. Ludendorff says that in his book, "Strategy & Policy", he often came to very different conclusions from those arrived at by the late Chancellor.

He says the Chancellor hampered the sea strategy at the beginning of the war in fatal fashion, basing his views on the naval archives and on Tirpitz's book. Also that v. Bethmann lost a great chance in 1916 by opposing unrestricted U-boat warfare. Lord Lee made that clear at Washington when he said that the result of the war might have been different had the Germans started their submarine operations earlier. Ludendorff says that the Chancellor failed to realise that America would in any case have come into the war even without the U-boat affair had victory inclined seriously towards the Germans. This fact was confirmed recently by Mr. Tumulty, private secretary to the President, and cannot be stated often enough to those who wish to understand the policy of Germany in the war.

von Bethmann stated Ludendorff to be against concessions to democracy, regarding them as a pure sign of weakness. Events, says Ludendorff, proved his views to be only too correct. The franchise of April 1917 was the beginning of the end.

There was no friction, as is so often stated, between Ludendorff and the Emperor. He was always a faithful servant but, as such, felt bound to point out the harm being done by the execution of the Chancellor's policy. In July 1917, he had to insist with all the power at his command on von Bethmann's dismissal.

III. *Prospects of War in the Far East.*

This is taken from a series of articles by Dr. Krause. The author does not regard such a war as likely in the near future. England has suffered and is suffering too much to want war. She can no longer keep her place as mistress of the seas; hence her wish for the Washington Conference and a Naval Holiday. Of the two great opponents in the East America is the stronger both physically and financially. She has large reserves of war

material and a vast population on which to draw. Japan on the other hand has lost her previous military superiority and any attempt on her part to enter into a competition in armaments would lead to financial ruin. As it is she is paying $3\frac{1}{2}$ times as much as her rival on war preparations. She might take the Philippines and strike a blow at Alaska but she could do no good by making a base in Mexico or South America and she would suffer heavily from industrial war and hunger blockade.

Moreover America would be further strengthened by the aid of Australia and Canada. The latter might indeed go to war now in order to profit by her present superiority of force but England stands in the way. Japan should avoid war, should try and improve her relations with China, make a compromise with America and maintain her alliance with England. In fact, her policy should be one of quiet development.

IV. *The crisis in the Italian army in October 1917.*
by Genl. v. Hofacker.

A continuation of the endeavour on the part of the author to fix the responsibility for the failure, on the 29th October, of the 5th and 6th German divisions to wheel to the left and thus cut off the 3rd Italian army.

V. *The Customs of War*, by Lt. General v. Winterfeldt.

A criticism of the French methods of examining prisoners of war based on a statement in Jean de Pierrefeu's book, "G. Q. G.", concerning the information obtained prior to the German attack on the Chemin des Dames in May 1917.

VI. *The new Income Tax.*

This shews a considerable reduction, which is curious; 10% instead of 20% on incomes of M. 50,000; 23% instead 40% on incomes of M. 200,000. The financial year is now being made to conform to the calendar year, so the new rules come into force on the 1st January.

Reviews.
Militär Wochenblatt.

14TH JANUARY 1922.

I. *von Bethmann Hollweg's Book.* By General Ludendorff.
(cont.)

Ludendorff here endeavours to show that von Bethmann was wrong in imputing to the O. H. L. the failure to make an earlier peace with Russia. He makes the point that O. H. L. was quite ready for the peace but was not going to allow the rather doubtful possibility of it to influence adversely their military operations. The subject was one that teemed with difficulty for the Germans, who wanted to make peace with Russia, keep peace with Austria and, at the same time, add to their strength the military force of Poland by proclaiming an independent kingdom of Poland to which neither Russia nor Austria would agree.

According to Ludendorff peace was impossible in 1916, because the influence of the British Ambassador was too strong; and when, in 1917, the Czar made his offer of peace to Count Czernin, the British Ambassador promptly dethroned him. O. H. L. acknowledges it made a mistake in trying to establish a kingdom of Poland but refuses to accept responsibility for other failures ascribed to it as regards Russia.

II. *Italy's military activity from 1915 to 1917.*

An article by General v. Cramon discrediting a recent Italian book in which a considerable value is claimed for Italian arms in the world war.

III. *The Army of France.*

An extract from an article of General Lécroix in the "Times", showing that France will be able to dispose of from 5 to 8 million men in the event of another great war.

IV. *What the upkeep of the Entente Supervision Commission costs Germany.*

A bitter complaint pointing out that a private soldier on an Entente Commission in Germany is paid better than a German General.

V. Franco-Polish Friendship.

Letters of New Year's greeting to Poland from Generals Castelnau and Weygand are given *in extenso*. They are annotated with exclamation marks (not wholly perhaps without reason) where praise is given to Polish moderation, justice, devotion to hard work and love of peace.

Militär Wochenblatt.

21ST JANUARY 1922.

I. *von Bethmann Hollweg's Book*. by General Ludendorff. (conclusion).

The concluding chapter of the review consists, in the main, of complaints made by Ludendorff against the Chancellor for keeping O. H. L. in the dark regarding the suggestion made by Prince Sixtus to Count Czernin for a separate peace on the part of Austria-Hungary.

II. *The crisis in the Italian army in October 1917.*

The controversy is continued by General Krafft von Dellmensingen who was at 14th A. H. Q. and made special notes of all occurrences at the time. He says the original scheme between A. H. Q. and the German O. H. L. was merely to better the Austrian line which had become impossible after the first Isonzo battle. It then grew to a proposal to capture the line Bergogna—Cividale—Plaviva, and to throw the Italians over the Tagliamento. Ludendorff, who in view of the serious situation in France had been very loth to lend a hand, wanted to have his troops sent back as soon as that task had been executed.

The more the 14th A. H. Q. studied the problem, however, the more clear it became, in view of the attrition of the Austrian man-power, that, to gain any solid advantage from the operation, the enemy must be pushed still further back to

where the Austrian line could be considerably shortened. The 14th A. H. Q. took it for granted that O. H. L. would agree to this if there was a real success and therefore planned to cross the Tagliamento, action to be taken on the far side according to circumstances. A wheel to the South was by no means excluded from their thoughts.

A. H. Q. was at Krainburg on the 27th but, as forward communication proved difficult, it moved to Cividale on the 29th. Finding matters still enveloped in the fog of war von Dellmensingen obtained permission to push on to Udine. There he met General von Hofacker and discussed plans with him. There had been very little resistance; the 5th and 26th German divisions had got well ahead and von Hofacker wanted them to march to Latisana. I persuaded him to let me go back to see the C. in C.; and the latter decided that the left wing of the army must march on Latisana while Hofacker's Corps moved to the bridges over the Tagliamento at and north of Codroipo.

III. *The Island Empire in the Far East.*—by Arthur Dix. The writer says that, at the beginning of the Washington Conference, it looked very much as if America had conspired with England to make Japan appear as the disturber of the peace, much as France and England contrived to make Germany the scapegoat in this respect in 1914, and that Japan, with great skill, managed to escape from that position and place the French therein; so much so that the latter had some difficulty in obtaining admission to the Four-Power Pact.

Japan gained by the treaty a period for peaceful development. Her whole behaviour at the Conference should serve as a model for the Germans to copy; for, says the writer, we always have to make a great noise to get our people going in the right direction—and this was the cause of the failure of our pacifist policy in 1914.

IV. *The war between the Bolsheviks and the Don Cossacks in the South of Russia, February 17th to March 20th.*

Review of a book by Colonel von Dobrynin.

Revue Militaire Generale.

DECEMBER 1921.

1. *The break-up of the Russian front.*—by General Martchenko.

This consists of articles from a book by General Krassnov, "From the Double Eagle to the Red Flag", which is said to be comparable to Tolstoi's "War and Peace". It is well worth reading. It describes the visit of two delegates from a regiment at the front to a general meeting at Loudsk. How a general shook hands with them; how they signed as for the the Bolsheviks as the party promising true liberty and the largest gifts of land; how the sentries were all sitting down smoking their pipes. These and like wonders they related on return to their simple comrades in the trenches. At once the fairy tales that have been circulating are clothed with reality. No more work, no more taxes, no more police. Just a rich and idle future—Liberty and equality—ideas for ever incompatible—made their never failing appeal to the untutored mind.

In the midst of all this a gas attack by the Germans. Taken by surprise, their gas-masks discarded, a terrible panic ensues—two days of horror.

Reserves arrive. Two gallant regiments are endeavouring with some hope of success, to recapture the lost trenches. Suddenly a group breaks away hoisting a red flag. "Down with the war. Your general has sold you to the enemy. Sauve qui peut." The attack break up. There is rush for the single bridge over the river in rear. There is a limit to its capacity. Some take to the ice, which breaks. Enemy aeroplanes swoop down to pistol range of the crowds on the bridge. It is murder en masse and there is no reply.....

II. *"The re-casting of our regulations and our doctrine of War."*—by Lucius.—(continued).

The chapter deals with the operations in the Spring 1917, with the brilliant but limited success of the British at Arras and with the failure of the French on the Aisne. It is pointed out that even after the Nivelle failure, the success of the British and the heavy losses suffered by the Germans has produced a situation which might well have been turned to profit by a continuation of the offensive, that this was strongly urged by Sir Douglas Haig, but that the defeatist element was then strong in the French councils, and a favourable opportunity of finishing the war was allowed to pass.

In the instructions issued during the period under review attempts were made to combine methodical action with rapidity of movement and quick exploitation of success. Failure was largely due to the absence of surprise.

By this time defensive methods had been perfected, but their very perfection was rendering the army unfit for offensive movements owing to the complete dependence of the infantry upon artillery support.

III. "*Infantry fire tactics before and after the war*," by Laffargue.

Part of a series of articles on this subject. It is shown how trench conditions brought grenades and rifle-grenades into favour only to be discarded in 1918 as soon as open warfare began.

IV. "*Strategy and operations in the East*,"—by Capt. Kuntz.

The "East" refers to the French right flank in the Western theatre.

V. "*The employment of Artillery*," by Commandant Pamard.

A sound enough article containing principles that may be found in the text book but throwing no light on vexed questions.

Revue Militaire General.

JANUARY 1922.

I. "*The type of cavalry we want.*" by General Rouillot.

A demand for a cavalry as numerous and as well-trained as before the war but stronger and better equipped with a M. G. squadron in the regiment and aeroplanes, wireless and cyclists incorporated in the division.

II. "*The re-casting of our regulations and our doctrine of war.*"—(continued) by Lucius.

Fifth period—the second half of 1917.

Before the battle of the Aisne operations were planned with the hope of a great break through and a decisive victory. After the battle there was a definite set-back to limited objectives.

The reasons are to be found in the situation at the time, the state of unrest and mutiny in the French army; and the wish to retain the initiative without risking another serious check. No great operation could be undertaken until strong action on the part of Russia should weight the scales against the German.

The instructions in these methods stated they were designed to wear down the enemy and reduce our losses to a minimum. They were to be surprise operations executed with the maximum of artillery and the greatest economy of infantry. A number of battles of this type are examined—Messines, the 3rd Ypres, the 3rd Verdun and it is pointed out that the wearing down process is a difficult problem that may not always be solved to one's own profit.

III. "*Strategy and operations in the East of France.*"—
(continued) by Capt. Kuntz.

IV. "*La Tranchee de la Soit.*"—by General Cordonnier.
An episode in the struggle round St. Mihiel.

V. "*The French Cavalry during the first three months of the campaign.*"—by Col. Monsenergue.

An attempt to display the operations of the French cavalry in their larger aspects unobscured by details of skirmishes, minor reconnaissances etc.

The work of the cavalry in covering the concentration and that of Sordet's Corps in Belgium are described.

Magazines and Journals.

"Tankitis" is the leading note in recent military literature. Colonel Fuller, the apostle,—the very St. Paul of tanks, has a powerful article on tanks in the *Army Quarterly*, proving by irrefutable arguments that they will dominate the battlefield of the future. Lt.-Col. Dundas in the *R.U.S.I. Journal* starts out, apparently, to curse this new disease but remains eventually to bless, driven by the inexorable logic of facts which he strives in vain to refute. Lt. Col. Croft, commanding a Tank battalion in the experimental brigade at Aldershot, lectured on the same subject at the R. U. S. I. All these articles are worthy of study.

The *R. A. Journal* of January is of particular interest. It has a really first class article on Army Sport by Captain Richards, D.S.O., M.C., which all interested in that subject should make a point of reading. The writer is a strong advocate of competitions within units by sub-units, of the representation of units by their best sub-units and, generally, of encouragement of the soldier to play rather than to look on. In the same number is the report of a lecture on Intelligence by General Macdonogh, for three years head of that branch at the War Office. He does

not claim, curiously enough, that our Intelligence service won the war; but he does charge the German Intelligence service with having gone far to lose the war for their side. He puts down "absolute impartiality" as the greatest requisite for a good intelligence officer, and the building up and verification of the enemy's order of battle as the most important function of offensive intelligence. (What an awful expression, by the way!). He pays a great tribute to the splendid services rendered by Captain (afterwards Brig. Gen.) Edgar Cox, R.E., whose death by drowning on the 26th August 1918 robbed the British Army of its finest Intelligence officer.

The Army Quarterly is, if possible, better than ever. It is, in our opinion, the best military magazine the world has yet produced, and is therefore deserving of whole-hearted support from all soldiers. Colonel Wavell's description of the strategy of Allenby's campaign is a masterpiece of its kind—simple, clear, convincing. It is illustrated by maps, bound very handily for reference, which shew the salient facts in strong relief. In the same number there is, conveniently enough, a translation of Liman von Sanders' views on the same subject.

The R. U. S. I. Journal contains the wonderful story of the "Wolf"—A German tramp, of a maximum speed of 10 knots, rigged up as a commerce destroyer, which from the time it left Kiel till its safe return there accounted (according to the German story) for 210,000 tons of shipping, mostly made up from small vessels. There is also the report of a lecture on Bolsheviki and the World Revolution by Mrs. Nesta Webster, whose book on the French Revolution revolutionized our knowledge of that event.

In the National Review for February there is a translation from Ludendorff's "Kriegfuhrung and Politik" on the subject of the Marne battle, but there is little in it that has not already been told us by von Kuhl and other German writers.

Brig. Genl. Stone dealing with "The reduction of Armaments" in the Nineteenth Century endeavours to anticipate the effects of the Geddes axe. He surveys our various theatres for possible reductions and advises us to get clear of our Middle-East entanglements; to keep safe in India and Egypt; and to watch Germany.

In the Contemporary Review the best article is that by Sir Valentine Chirol on the Washington Conference and the Pacific Problem. Dr. Seton Watson describes Hungary under the "Horthy" régime which latter, though a great improvement on the Communist Government it succeeded, is very far from perfect.

The Editor of the "Bengalee" (Calcutta) writes on "India at the cross roads", and deals with that somewhat hackneyed subject moderately and well. Finally under Foreign Notes, may be found an interesting account of Lenin's latest attempt to improve Russia's financial position.

Journal

OF THE

United Service Institution of India.

Published under the Authority of the Council.



SIMLA:

UNITED SERVICE INSTITUTION OF INDIA.

Published Quarterly.

XXXX

Price, Rupees 2-8.

Printed by S. H. LIDDELL, Longacre, Simla.

All Rights Reserved.

United Service Institution of India

RULES OF MEMBERSHIP.

ALL officers of the Royal Navy, Army, Royal Air Force, Colonial Forces, and of the Indian Defence Force, and Gazetted Government Officers shall be entitled to become members without ballot, on payment of the entrance fee and annual subscription.

The Council shall have the power of admitting as honorary members the members of the Diplomatic Corps, foreign naval and military officers, foreigners of distinction, other eminent individuals, and benefactors to the Institution, not otherwise eligible to become members.

Life Members of the Institution shall be admitted on the following terms:—
Rupees 75 + entrance fee (Rs. 10) = Rs. 85.

Ordinary members of the Institution shall be admitted on payment of an entrance fee of Rs. 10 on joining, and an annual subscription of Rs. 10, to be paid in advance. The period of subscription commences on 1st January.

Subscribing members of the Royal United Service Institution, Whitehall, London, are not liable for entrance fee while the affiliation rules are in force.

Life members receive the Journal of the Institution post free anywhere, but ordinary members only in India. All members may obtain books from the library on paying V. P. postage.

Honorary Members shall be entitled to attend the lectures and debates, and to use the premises and library of the Institution without payment; but should they desire to be supplied with the Journal, an annual payment of Rs. 10, in advance, will be required.

Divisional, Brigade and Officers' Libraries, Regimental Messes, Clubs, and other subscribers for the Journal, shall pay Rs. 10 per annum.

Serjeants' Messes and Regimental Libraries, Reading and Recreation Rooms shall be permitted to obtain the Journal on payment of an annual subscription of Rs. 8.

If a member fails to pay his subscription for any financial year (ending 31st December) before the 1st June in the following year, a registered notice shall be sent to him by the Secretary inviting his attention to the fact. If the subscription is not paid by 1st January following his name shall be posted in the Reading Room for six months and then struck off the roll of members.

Members joining the Institution on or after the 1st October, will not be charged subscription on the following 1st January, unless the Journals for the current year have been supplied.

Members are responsible that they keep the Secretary carefully posted in regard to changes of rank and address. Duplicate copies of the Journal will not be supplied free to members when the original has been posted to a member's last known address, and not been returned by the post.

Members or Subscribers to the Journal, intimating a wish to have their Journals posted to any address out of India, shall pay in advance Rupee 1 per annum, to cover foreign postage charges, but Life Members who have left India shall not be liable for foreign postage on Journals.

All communications shall be addressed to the Secretary, United Service Institution of India, Simla.

Contributions to the Journal.

All papers must be written in a clear, legible hand, and only on one side of the paper. All proper names, countries, towns, rivers, etc., must, when in manuscript, be written in capital letters. All plans must have a scale on them.

Contributors are responsible, when they send articles containing any information which they have obtained by virtue of their official positions, that they have complied with the provisions of A. R. I., Vol. II., para. 487, and King's Regulations, para. 453.

Anonymous contributions under a *nom-de-guerre* will not be accepted or acknowledged; all contributions must be sent to the Secretary under the name of the writer, and the paper will, if accepted, be published under that name unless a wish is expressed for it to be published under a *nom-de-guerre*. The Executive Committee will decide whether the wish can be complied with.

The Committee reserve to themselves the right of omitting any matter which they consider objectionable. Articles are only accepted on these conditions.

The Committee do not undertake to authorise the publication of such papers as are accepted, in the order in which they may have been received.

Contributors will be supplied with three copies of their paper *gratis*, if published.

Manuscripts of original papers sent for publication in the Journal will not be returned to the contributor, unless he expresses a wish to have them back and pays the postage.

To
The Leading Clubs & Messes in India

—••—
PHIPSON & Co.,
LIMITED.

Wine Merchants.
—••—

Head Office:—BOMBAY.

Branches:—DELHI,

SIMLA,

KARACHI,

BAGDAD,

and BASRA.

Price List on Application.

United Service Institution of India.

PATRON.

His Excellency the Viceroy and Governor-General of India.

VICE-PATRONS.

His Excellency the Governor of Madras.
His Excellency the Governor of Bombay.
His Excellency the Governor of Bengal.
His Excellency the Commander-in-Chief in India.
His Excellency the Governor of the U. P. of Agra and Oudh.
His Excellency the Governor of the Punjab.
His Excellency the Governor of Burma.
His Excellency the Governor of Bihar and Orissa.
His Excellency the Naval Commander-in-Chief, East Indies.
The General Officer Commanding-in-Chief, Northern Command.
The General Officer Commanding-in-Chief, Southern Command.
The General Officer Commanding-in-Chief Eastern Command.
The General Officer Commanding-in-Chief Western Command.

MEMBERS OF THE COUNCIL, 1921-22.

Ex-officio Members

- | | |
|--|---|
| 1. The Chief of the General Staff. | 5. The Quartermaster General in India. |
| 2. The Secretary, Army Department. | 6. The Director, Medical Services. |
| 3. The Hon'ble Mr. Denys Bray, C.I.E.,
C.B.E. | 7. Col. Sir S. Crookshank K.C.M.G., C.B.,
C.I.E., D.S.O., M.V.O. |
| 4. The Adjutant General in India. | 8. The Director, Military Operations—
General Staff. |

Elected Members.

- | | |
|---|---|
| 1. Major-Genl. W. C. Black, C.I.E. | 7. Lt.-Col. E. H. Sweet, C.M.G., D.S.O. |
| 2. Col. W. D. Waghorn, C.B., C.M.G. | *8. Lt.-Col. A. H. R. Dodd. |
| 3. Col. A. F. Cumberlege, O.B.E. | *9. Lt.-Col. C. Read, D.S.O. |
| *4. Col. H. R. Nevill, C.I.E., O.B.E. | *10. Dr. G. T. Walker, C.S.I. |
| *5. Col. H. Rowan-Robinson, C.M.G.,
D.S.O. | 11. Mr. H. G. W. Meikle, F.F.A. |
| *6. Lt.-Col. A. C. Ogg, D.S.O., O.B.E. | *12. Major R. S. Abbott, M.C. |

*** Members of the Executive Committee and in addition.**

H. HAWARD, ESQ.
SECRETARY & EDITOR
SUPERINTENDENT
LIBRARIAN
BANKERS

.. LIEUT.-COL. R. M. Luckock, C.M.G., D.S.O.
.. LIEUT. COL. F. A. FINNIS.
.. S. SGT. E. F. CLARKE, I.O.D.
.. MISS E. K. SUSSENS.
.. ALLIANCE BANK OF SIMLA, LTD.

1. The United Service Institution of India is situated at Simla.
2. Officers wishing to become members of the United Service Institution of India should apply to the Secretary. The rules of membership are printed on the opposite page.
3. The reading-room of the Institution is provided with all the leading newspapers, magazines, and journals of military interest that are published.
4. There is a well-stocked library in the Institution, from which members can obtain books on loan, free. Suggestions for new books are solicited, and will be submitted to the Committee. Books are sent out to members V. P. for the postage, or bearing by railway.
5. The Institution publishes a Quarterly Journal in the months of January, April, July and October which is issued postage free to members in India and to all life members; but ordinary members wishing to have their journals sent to any address out of India must pay in advance Re. 1 per annum to cover foreign postage charges.
6. Members and the public are invited to contribute articles to the Journal of the Institution for which honoraria will be awarded by the Executive Committee. Rules for the guidance of contributors will be found on the opposite page.
7. **MEMBERS ARE RESPONSIBLE THAT THEY KEEP THE SECRETARY CAREFULLY POSTED WITH REGARD TO CHANGES OF ADDRESS.**
8. When on leave in England, members can, under the affiliation rules in force, attend the lectures and make use of the reading-room, etc., of the Royal United Service Institution, Whitehall, on payment of a subscription of 5 shillings per six months.

Rubbing
with

ELLIMAN'S

Eases
Pain.



ELLIMAN SONS & CO., SLOUGH, ENGLAND.

United Service Institution of India

APRIL 1922.

CONTENTS.

1. Secretary's Notes	...	...	...	ii
2. The Mutiny Day by Day	...	...	...	119
3. Fighting on N.-E. Frontiers...	...	...	...	157
4. Principles of Training	...	...	...	164
5. Reviews:	...	...	...	175

SECRETARY'S NOTES.

I.—New Members.

The following new members joined the Institution from the 1st January to the 10th February 1922.

LIFE MEMBERS.

Capt. M. F. Keightley.

Lient A. P. Block.

Capt. H. M. K., Gracey.

Capt. J. A Glegg.

ORDINARY MEMBERS.

Capt. L. E. Wilson.

Capt. F. G. Abram.

Capt. A. F. Chater.

Capt. R. J. Bird.

Capt. A. H. Harris.

II.—Examinations.

Books on Military History and Languages with Dictionaries are available in the Library and the following list of books, which is complete in accordance with the War Office list, may be found useful for reference by officers, studying for promotion examinations or entrance to the Staff College.

Those books marked (*) are not at present in the Library, but have been ordered, the remainder are available for use by members.

MILITARY HISTORY. (SPECIAL PERIOD.)

1. *The Campaign of the British Army in France and Belgium up to 20th November 1914.*

A.—OFFICIAL ACCOUNT.

Sir John French's Despatches.

B.—OTHER BOOKS.

40 days in 1914 by General Maurice (new edition).

The Battle of the Marne, by G. H. Perris.

1914, by Viscount French.

General sketch of the European War, by Belloc.

The Great War, by Colonel Sedgwick.

My Memoirs, by Ludendorf.

Falkenhayn's book.

Von Kluck's book.

British Campaign in France, Flanders, by Conan Doyle, 1914.

Nelson's History of the War.

Ypres, by German General Staff.

Oxford pamphlets. August 1914. The Coming of the War, by S. Williamson.

Oxford pamphlets. August 1914. No. VII and X.

Times Documentary History of the War, Vol. V. Military, Part I.

" " " " " Vol. VIII Part III.

Der Grobe Krieg Schlacht bei Mons.

Der Grobe Krieg Schlacht bei Longwy.

2. *The Palestine Campaign.*

A.—OFFICIAL ACCOUNT.

A brief record of the advance of the Egyptian Expeditionary Force 1919.

B....OTHER BOOKS.

Allenby's final triumph, by W. T. Massey.

How Jerusalem was won, by W. T. Massey.

3. *Organization of Army since 1868.*

A....ORGANIZATION OF ARMY SINCE 1868.

History of British Army, by Fortescue.

Outline of Development of British Army, by Genl. Anderson.

Our Fighting Services.....by Sir Evelyn Wood.

B....FORCES OF THE EMPIRE.

The Statesman's Year Book.

Army List.

Articles in Newspapers and Magazines viz., R. U. S. I.

Army Quarterly, Journal of the U. S. I. of India, etc.

4. Development and Constitution of the British Empire.**A. THE BRITISH EMPIRE.**

Encyclopedia Britannica—(Contains much concentrated information).

The Statesman's Year Book.

Whitaker's Almanack.

The Colonial Office List.

*The British Empire and its History, by E. G. Hawke.

The Government of British Empire, by Jenks 1918.

The British Empire (6 lectures) by Sir C. P. Lucas 1918.

*The foundation and growth of the British Empire, by J. A. Williamson 1918.

*The beginnings of English Overseas Enterprise, by Sir C. P. Lucas 1917.

*The Government of England, by L. A. Lowell 1912.

*The Expansion of the British Empire, by W. H. Woodward 1900

*Overseas Britain, by E. F. Kuight 1907.

*The origin and growth of the English Colonies and of their system of Government, by H. E. Egerton 1903.

*A short History of Politics, by Jenks 1900.

*The English Constitution, by Bagehot 1909.

*The Expansion of England, by Sir J. Seely 1883.

*Introduction of the study of the law of the Constitution, by A. V. Dicey 1908.

England in the Seven Years' War, Sir J. Corbett 1907.

*Selected Speeches and Documents on British Colonial Policy—
2 Vols. A. B. Keith, 1918.

B.—BOOKS ON SPECIAL PORTIONS OF THE EMPIRE OR WORLD.

The rise and expansion of British Dominions in India, by Sir A. C. Lyall 1894.

A brief history of the Indian Peoples, by Sir W. H. Hunter 1907.

*The Nearer East, by Hogarth 1902.

Modern Egypt, by Cromer 1908.

*Egypt in the Nineteenth Century, by D. A. Cameron 1898.

*The History of Canada, by W. L. Grant.

*The Making of Canada, by A. G. Bradley 1908.

*Nova Scotia, by B. Wilson 1911.

*Report on British North America, by Sir C. P. Lucas.

The Union of South Africa, by R. H. Brand 1909.

Secretary's Notes.

*The Partition of Africa, by J. Keltie 1909.

Short History of Australia, by E. Scott.

*History of the Australasian Colonies, by Jenks 1912.

The English in the West Indies, by J. A. Froude 1888.

The Lost Possessions of England, by W. F. Lord 1896.

5. Military Geography.

Naval and Military Geography of the British Empire, by Dr. Vaughan Cornish 1916.

Outlines of Military Geography, by Col. A. C. Macdonnell 1911.

Introduction of Military Geography, by Col. E. S. May.

Imperial Defence.....by Col. E. S. May.

Britain and the British Seas, by H. J. Mackinder 1907.

Military Geography, by Macguire.

Imperial Strategy, by Repington.

War and the Empire, by H. Foster.

Historical Geography of British Colonies (Dominions) 7 Vols. by Sir C. P. Lucas 1906-17.

*Vol. 1 Mediterranean.

*Vol. 2 West Indies.

*Vol. 3 West Africa.

*Vol. 4 South Africa.

*Vol. 5 Canada.

*Vol. 6 Australia.

*Vol. 7 India.

The Influence of Sea Power on History, by A. I. Mahan 1890.

Historical Geography of the British Empire by Hereford George.

The Mastery of the Pacific, by A. R. Colquhoun 1902.

Frontiers.....by C. B. Fawcett 1918.

III.—Payment for Articles in the Journal

Articles accepted for publication in the Journal are paid for, and a sum of approximately Rs. 400 is awarded for articles and reviews published in each Quarterly Journal.

IV.—Contributions to the Journal.

With reference to Army Regulations, India, Volume II, paragraph 487, and King's Regulations, paragraph 453, as amended by Army Order 340 of 1913, intending contributors to the Journal of the United Service Institution of India are informed, that action to obtain the sanction of His Excellency the Commander-in-Chief to the publication of any article in the Journal of the United Service Institution of India will be taken by the Committee. Contributors are, therefore, responsible that the sanction of their immediate superior has been obtained, and this should be noted on all articles sent for publication. Articles need not be submitted in duplicate.

Contributors must have their articles either typed or printed.

2. It has been decided to introduce two new items in the Journal headed—

i. Criticisms

ii. Notes on current Military and Naval questions.

The rules for (i) to be—

That the criticism should be headed with the title of the article criticised, and the date of the Journal in which published.

That criticisms should be signed with a nom-de-plume, but that critics must disclose their identity to the Secretary.

The rules for (ii) to be the same as for Articles.

Instructions for the Preparation of Drawings and Plans for Reproduction by Lithography.

These should be in *jet* black. No washes nor ribaunds of colour should on any account be used.

If it is absolutely necessary to use colour (and these are only permissible in line work or names) the following will reproduce photographically, *i.e.* :—

Dark red, dark orange, dark green. No other colour should on any account be used.

V.—Library Catalogue.

Under Revision.

VI.—Gold Medal Prize Essay 1921-22.

For subject and conditions please see page x.

VII.—Army List Pages.

The U. S. I. is prepared to supply members and units with manuscript or typewritten copies of Indian Army List pages, at the following rates:—

Manuscript, per page Re. 1.

Typewritten, per page Rs. 2.

VIII — Books.

Books presented.

"Work of the Royal Engineers in the European War 1914-19" 5. Vols:
1. Water Supply, 2. Bridging,
3. Supply of Engr. Stores and Equipment, 4. The Signal Service in the European War. 1914-18, 5. Water Supply-Egypt and Palestine.

India's Parliament. Pub. 1921.

Selections from Captain Birch's Note books 1818-1821.

Books ordered.

1. An Englishwoman in Germany during the War.
2. Book on accounts.
3. Staff College Promotion Examination Papers-1922.

Presented by the Secretary, Royal Engineers Institution, Chatham.

Presented by the Punjab Government.

do.

Author.

Princess Blueher.

Routh.

Military Widows' Fund, British Service.

This Fund enables a British Service (Army) officer, by subscribing from Rs. 2 to Rs. 4 monthly, to assure, in the event of his death while on the Indian Establishment, immediate payment :—

To his widow	Rs. 3,900	to	Rs. 5,100
For each child	„ 300	to	„ 500

Payments are made immediately on receipt of report of death, irrespective of death occurring in or out of India.

The sum paid to the widow varies with subscription, and the sum for each child varies with age of child. Subscriptions are based on the pay of the officer.

Benefits are payable whether the deceased officer's family is residing in India or not.

It is to the advantage of an officer to join the Fund on his first tour of service in India, as otherwise, on joining it in a subsequent tour he would have to pay subscriptions for any previous tours in the country as a married officer.

The Fund (late Queen's Military Widows' Fund) was established in 1820, to assist families of British Service (Army) officers dying in India, and mainly to enable them to return home without delay.

The Fund is controlled by a Committee consisting of and elected by subscribing officers serving at Army Head Quarters, Simla.

For admission and rules apply to :—

The Secretary,

MILITARY WIDOWS' FUND,

Army Head Quarters,

Simla.

The Journal
OF THE
United Service Institution of India.

Vol. LII.

APRIL 1922.

No. 227

THE MUTINY DAY BY DAY.

BEING

EXTRACTS FROM THE LETTERS

OF

GENERAL SIR ARCHDALE WILSON, G. C. B.,

TO HIS WIFE.

EDITED BY COLONEL H. R. NEVILL, C.I.E., O.B.E., I.C.S.

PART VII.

The Road to Lucknow.

CXLI.

Hd. Qr. Camp,

26th. Jan, 1858.

Here we are safe and sound after a rather fatiguing trip with heavy roads and bad horses. We did not arrive at Bewar until half past nine, and then found that our horses, tents and servants had gone on to this. We had nothing for it but to collect Coolies for the Carriages, which we did by 1 o'clock, and reached Camp by half past 8 this morning. I have had a long talk with Sir Colin, whom I like very much : there is little fear of our not getting on well together. I told him I did not wish for the Benares Division, and that as soon as the present business was over I should ask for leave for England. He seemed quite satisfied. I have learnt from him

The Mutiny day by day.

some things that have astonished me not a little, but I must keep it all for your own private ear, when we meet again. God grant, Dearest, that will be soon, with no more of these separations to look forward to. The long Bearer you sent to join my baggage only came in to-day, looking like a ghost. He was taken in on the road somewhere.

I have as yet seen little of this Camp, and can only send you a short *Chit*. Remington and Le Geyt Bruce have just come in, both *got so fat*.

NOTE.—Sir Colin Campbell had taken Fatehgarh on the 3rd of January, and thereby cleared the Doab. The rebels were in great force on the north bank of the Ganges and also to the south of the Jumna; but the routes to Meerut and Agra were secured against all but raiders. To the west Etawah had been occupied recently by Walpole, while on the Cawnpore side there were intermediate posts at Sarai Miran and Bithur. The area from Cawnpore to Agra was entrusted to Colonel Seaton, and his special charge was to ensure the safety of the siege train on its way from Agra to Cawnpore. By a feint the Commander-in-Chief managed to give the rebels in Rohilkhand the impression that he intended to attack towards Bareilly and so pinned them to the Ramganga; but after some ten days a body of 5000 crossed the Ganges at Surajghat and occupied Shamsabad, thus threatening Fatehgarh. This force was dealt with shortly, but it was close to the road which Wilson had to traverse, and communications had to be maintained by means of detachments posted all along the Grand Trunk Road.

It is unfortunate that Wilson, who was generally so communicative in his letters, did not mention the information he received from Sir Colin Campbell. It was their first meeting, but the Commander-in-Chief had already formed a very high opinion of his chief Artillery officer, and was prepared to receive him well.

Wilson had travelled from Bewar, some 42 miles, by *palki* or palanquin, in a little over twelve hours.

CXLII.

Hd. Qr. Camp, Fultyghur,

27th Jan. 1858.

I have been enquiring about the Convoy for the ladies from Agra. The Com. in Chief is very anxious it should march earlier than the 12th and wrote to that effect to Frazer.

I have very little to tell you beyond this. We have very nasty weather, Mist and cloudy. A Force moved out of Camp very secretly last night. They are bound to Mow, a place about 12 miles off, to try and cut off some fellows who have crossed to this side of the River. I am very busily engaged in arranging for our operation before Lucknow, but I cannot say when we shall move from this, not for another 10 days I should think. Mr. Raikes has just called upon me. He appears an agreeable pleasant man.

NOTE.—Mr. Charles Raikes was a Judge of the Court of Appeal at Agra, Col. Hugh Fraser, C. B., Chief Engineer at Agra, was at the time Chief Commissioner for Agra and its dependences, a post which he had held from the 30th September, shortly after the death of Mr. Colvin, and retained till the 9th February 1858, when Lord Canning took over the administration in person.

CXLIII.

Hd. Qr. Camp, Fulttyghur,

28th. Jan, 1858.

The Force which went out to Mow or rather Shamshabad came up with the enemy, took four Guns, and killed some 300 and upwards. We have, however, met with great loss in Cavalry Officers. Steele and Willis 9th Lancers wounded, Hodson, Gough and McDowell also wounded, the latter leg amputated. The Surgeon of the Punjaub Infantry and some of the men much burnt by an explosion in the enemy's Camp after its capture. The Artillery and European Infantry had not a man touched. I and Staff are pitched in the C. in C's Camp, and have established our own small Mess. Tombs' Troop has been ordered to join the Camp. He must collect his Divisions and hurry down as fast as he can. John will have to remain with the Hd. Quarters at Meerut, I suspect, much to his disgust.

Molee desires me to send you his grateful respects.

NOTE.—This letter contains a very brief account of a brilliant action conducted by Brigadier Adrian Hope, who was ably supported by Captain

The Mutiny day by day.

Remington, in command of the Artillery and Captain C. P. Johnson, of the 9th Lancers, commanding the Cavalry of the column. The Enemy were engaged in the morning of the 27th, at Sutia, half a mile from Shamsabad, and were defeated with great loss, being pursued for eight or nine miles. Those who escaped made their way across the Ganges, and the pressure on this side was relieved for a long period. The account of the battle is given in full:—

FROM

BRIGADIER A. HOPE,

*Lieutenant Colonel, 93d Highlanders,**Commanding 3d brigade of infantry.*

TO

THE CHIEF OF THE STAFF.

*Camp, near Fullehghur,**29th January 1858.*

SIR,

I have the honour to report that, in accordance with the

Detail of Troops.

2 Squadrons 9th Lancers.

200 Hodson's Horse.

1 Troop Bengal Horse

Artillery.

Field battery (4 guns)

Bengal Artillery

42d Royal Highlanders.

53d Regiment.

4th Punjaub Rifles.

Commander-in-Chief's orders, communicated by you, I marched from this camp (leaving the tents standing) on the 26th instant, at 11 P. M., with the troops noted in the margin, and halting for three hours, short of the village of Kooshinabad, proceeded at day-light on the 27th towards Shumshabad.

A thick fog compelled us to move cautiously, and it was 9 o'clock before the Column closed up under cover of the village of Shumshabad.

The rebels in considerable force had taken post about $\frac{1}{4}$ of a mile beyond that place. They occupied a commanding knoll on the edge of the plateau overlooking the plain, which stretches towards the river some six miles distant. On the knoll was a brick building, the shrine of a Mussulman Saint, and the place was surrounded by the remains of an old entrenchment, upon which they had raised a sand-bag battery. Their

front was defended by a ravine (impassable for cavalry or guns) which runs at right angles across the road to Mhow, along which we moved, and to the right of which their position was,

As the head of our column emerged from the village, the fog cleared off and some cavalry out-posts of the Enemy having been driven in, we moved over some broken ground towards their camp, now distinctly visible. They immediately opened upon us a well directed fire of round shot, by which Lieutenant McDowell, of Hodson's Horse, a most active officer, was mortally wounded.

Captain Remington then led his Troop of Horse Artillery at a gallop across the bridge, where the road crosses the ravine, and supported by Captain Hodson's irregular horse, wheeled to the right and opened fire on the flank of the Enemy's camp.

The rebel sowars made a daring attempt to outflank and cut off these guns, but were very boldly met by Captain Hodson, afterwards supported by the 9th Lancers under Captain Steele; and in the charge which ensued, were driven over the steep bank into the plain below.

Meanwhile, Captain Blunt brought his guns into action in an excellent position on the right bank of the ravine, and the line of infantry was formed on the right, consisting of the 4th Punjaub Rifles under Captain Wylde, the 42d Royal Highlanders under Lieutenant Colonel Cameron being on the extreme right, the 53d Regiment under Major English being in second line.

The Enemy were unable to withstand the admirable fire of our guns, and I ordered the infantry, who had been screened in a hollow of the ground, to advance; and soon after seeing the camp nearly abandoned, the 4th Punjaub Rifles were directed to secure it, which they did in a very spirited manner, shooting down many of the retreating Enemy.

The Mutiny day by day.

The 42d at the same time changed front to their right, and lining the crest of the high bank, fired down on the rebel cavalry, who were moving on the plain towards our right flank.

The cavalry and horse artillery advancing from our left flank, pursued the Enemy across the the plain, killing numbers of them.

A wing of the 53d was left to secure the position gained, the rest of the force moving some distance over the plain, till it was evident that no further stand could be made by the rebels.

The infantry and guns then returned, and our bivouac was formed near the rebel camp; the cavalry with two guns (the whole under Captain Johnson, 9th Lancers) following up the track of the Enemy for nearly ten miles, and returning at about 4 P. M.

In the Enemy's camp were taken four brass guns, with a considerable quantity of ammunition, colors, &c., &c.

I believe the Enemy's force to have consisted of two regiments from Bareilly, the Pathans of Mhow, Shumshabad, Kaingunge, &c., and a good many of the armed rabble collected by the hope of plunder. I should estimate their loss at 300 men, including two or three of their chiefs.

I enclose a list of our casualties,* and His Excellency will see with regret that both Captain Steele and Captain Hodson have received severe sword-cuts, while heading the pursuit.

The loss in the 4th Punjaub Rifles was almost entirely caused by the explosion of one of the enemy's tumbrils.

I beg to express my very sincere thanks to all the officers in command of corps and to the troops under their orders, and in particular to Captain Remington and Captain Johnson, respectively, the senior officers of artillery and cavalry, for the able assistance they rendered me.

*One Officer, five other ranks killed, three missing, and five Officers and 34 other ranks wounded.

Captain Hodson's local knowledge and information was most valuable.

Captain Cox, 75th Regiment, my Brigade Major, and Lieutenant Butter, 93d Highlanders, my Orderly Officer, were most active and useful to me.

The force returned to camp with the guns captured, of which I enclose a return, as also the reports of Captains Remmington and Johnson.

FROM

CAPTAIN REMMINGTON,

Commanding Artillery with Brigadier Hope's Force,

TO

CAPTAIN COX,

Major of Brigade, Brigadier Hope's Force.

Camp, Futtehghur, 29th Jaunary, 1858.

SIR,

I have the honour to report, for the information of Brigadier Hope, that when the artillery was ordered to the front on the morning of the 27th instant, I proceeded with the 1st Troop, 1st Brigade, Horse Artillery, under the guidance of Captain Hodson, with the view of taking the enemy's position in flank. The ground was very much broken, and between us and the enemy was a deep ravine.

Directly we advanced, the enemy opened on us a fire of round shot. Captain Hodson having pointed out to me a bridge over the ravine, we galloped across, wheeled to the right, and advanced till within about six hundred yards of the enemy's position. We opened fire here with great effect, our shot and shell evidently telling on the mass of men in the entrenchment, besides exploding an ammunition tumbril and firing the enemy's camp. During these operations Captain Blunt advanced with his battery rapidly to the front, and opened fire across the ravine at about the same distance from the enemy's position as the ground we occupied. Captain

The Mutiny day by day.

Blunt's position was most judiciously selected, his fire taking the face of the entrenchment opposed to us, and our fire performing the same good office for him. The enemy's fire, considering the small number of guns he had (four), was for a short time vigorous and well sustained, but the concentrated fire of our ten guns was too much for him, and in half an hour he abandoned his guns and entrenchment, and fled in confusion. We galloped up to the brink of the cliff on which the enemy's position was (leaving the entrenchment to our right) and plied the fugitives in the plain below with round shot and grape. Captain Blunt advanced on the right of the entrenchment, and his fire raked the base of the cliff most effectively. We afterwards descended into the plain; but the enemy's flight was too rapid to admit our overtaking them in a stern chase over very heavy ground, after a long march over sandy roads. I detached two guns under Lieutenant Lindsay to follow up the retreat with the cavalry, and with the main body returned to the captured entrenchment near which our camp was formed. Accompanying is a list of the captured ordnance. The casualties in the artillery, I am happy to say, are only two horses, one killed, the other wounded, both of the 1st Troop, 1st Brigade Horse Artillery. I beg to forward, for the Brigadier's inspection a plan of the enemy's position, by Lieutenant Traill, an officer of my troop.

FROM

CAPTAIN C. P. JOHNSON, *9th Lancers,*
Commanding Cavalry of the Column,

TO

BRIGADIER THE HONORABLE ADRIAN HOPE,

&c, &c, &c.

SIR,

I have the honor to submit to you the part taken by the cavalry under my command, consisting of 196 men of the 9th Lancers under Captain Steele, and 230 men of Hodson's Horse, in the operations at Shumshabad,

The enemy's position having been ascertained, Captain Remington's troop of horse artillery was ordered by you to cross the bridge over the nullah and attack their right flank. Captain Hodson's regiment was sent in support; this point, however, was not gained without loss, Lieutenant McDowell, of Hodson's Horse, was struck down by a round shot and mortally wounded, and one man and horse of the 9th Lancers killed.

In Lieutenant McDowell, the service has lost a gallant and valuable officer.

On reaching the right flank of the enemy, their cavalry was observed in considerable force to our front and left. Captain Hodson immediately advanced his regiment, and attacking them with his accustomed gallantry, completely routed them, many of their dead being left on the field. I regret to state that both Captain Hodson and Lieutenant Gough, of his regiment, were wounded.

The precision of the artillery fire having partially dislodged the rebels from their entrenched position, the 9th Lancers were ordered to advance to the support of Hodson's Horse, who were already engaged with parties of their broken infantry, one squadron being left in reserve, as a detached portion of the enemy's cavalry still threatened the guns.

The attack to the front now became general, and was entirely successful, though not unattended with loss. Captain Hodson, who had persevered in spite of his wound, was again wounded, and this time severely, and compelled to resign his command to Lieutenant Wise, who ably led the regiment for the remainder of the day.

Captain Steele, commanding the detachment of the 9th Lancers, whilst gallantly charging at the head of his men, was severely wounded; Lieutenant Wills, of the same corps, slightly.

The Mutiny day by day.

The pursuit was continued for some distance, and upwards of 300 of the enemy were killed. According to your instructions, I subsequently advanced with the cavalry and 2 guns of Captain Remington's troop of horse artillery for some miles on the road towards Sewajpore ghat, but met with no opposition. The enemy appeared to have been scattered in all directions.

I beg respectfully to call your attention to the disproportionate number of officers who were wounded, as a proof of the noble manner in which they led their men; to the number of the enemy's slain, as a proof that the men were not wanting in the support of their officers.

In fact the conduct of the men during the long day's work was admirable.

They had been ten successive hours in the saddle before coming into action, and nineteen before the pursuit was abandoned; but were always ready.

I beg to enclose a list of casualties.

CXLIV

Hd. Qr. Camp Fultlyghur.

29th Jan. 1858.

Your letters of the 26th and 27th came to-day; they had been wandering all over Camp, and had been rescued for me by Remington.

The change of date of starting the Escort was a sudden one, but should have been immediately made known by the Agra noodles. I am very glad you will be able to arrange all to be in time. I shall feel much easier when I know you are safe in Calcutta.

I am going to dine at the Engineer's Mess to-night, they are pitched somewhere near the Fort, 3 good miles off, don't you pity me?

Two of the six sheep I brought with me have been carried off by some Cormorants Seikhs or Highlanders. They are a great loss to our Mess.

NOTE.—The fact that it was now considered possible to evacuate some of the women and children clearly demonstrates the improvement in the situation effected by the capture of Delhi and the concentration of the formidable force under Sir Colin Campbell. The focus of the rebellion had definitely shifted eastwards, and though the Doab was far from pacified as yet, the main seat of disturbance was restricted to Rohilkhand and Oudh. The convoy was covered successively by the Rohilkhand expeditionary force collecting at Roorkee, the garrisons at Meerut and Aligarh, the headquarters at Fatehgarh and by the forces at Cawnpore and Allahabad, while the main army of the rebels was effectively contained at Lucknow by Outram who held the Alam-bagh in strength.

CXLV.

Hd. Qr. Camp Fulttyghur

30th Jan. 1858.

I upset the Buggy coming home last night from the Engineer's Mess, Johnson and myself both thrown out. He has unfortunately a sprained ankle, I escaped with my usual good luck with a few very slight bruises which have made me feel rather stiff to day.

NOTE.—Major E. B. Johnson, who had been closely attached to General Wilson throughout the Siege of Delhi, was now Assistant Adjutant General on the Artillery Divisional Staff. The other officers were Lieut. R. Biddulph, D. A. Q. M. G., Captain C. H. Barchard, 20th N. I., and Lieutenant H. G. Deeles, 60th Royal Rifles, Aides-de-Camp; Lieut. Col. C. Hogge, Bengal Artillery, Director of Artillery in the Ordnance Department; Brigadier D. E. Wood, C. B., R. H. A., Commanding the Field Artillery Brigade, with Lieut. J. S. Frith, Bengal Horse Artillery, as his Brigade Major; and Brigadier G. R. Barker, C. B., R. A., Commanding the Siege Artillery Brigade, his Brigade Major being Lieut. A. Bunny, Bengal Horse Artillery. Subsequently the Naval Brigade under Captain W. Peel, C. B., R. N., was added to the Division.

CXLVI.

Hd. Qr. Camp Fulttyghur,

31st Jan. 1858.

We are all on the move here. The C. in C. moves tomorrow morning by forced marches to meet the Gov'r Gen'l

The Mutiny day by day.

who is coming up the Country and will be at Benares on Wednesday. Whether he comes on to Cawnpore or only to Allahabad I don't know. The Column here marches tomorrow by the regular marches, and Walpole's Column follows 3 days afterwards. I go on with the Chief's Camp to which address me—you will hardly, I expect, get down to Cawnpore before we shall have left it. It would be pleasant, would it not ? if we settle matters at Lucknow in time for me to join you on your way down.

NOTE—It was now time for the Commander-in-Chief to proceed to the base of operations against Lucknow, his principal objective. He had been compelled to secure Fatehgarh in order to safeguard his northern line of communications. This had been accomplished by the battle of the Kali Nandi on the 2nd January, and thereafter his own inclination had been to follow up the rebels into Rohilchund so as to clear that province before making the final effort against the concentrated remnants of the rebel army. Lord Canning, however, was insistent on the immediate recovery of Lucknow, and his will prevailed. Fatehgarh and the Doab were left to the charge of Seaton with a weak force, Walpole's brigade, to which Fatehgarh had formerly been entrusted, being added to the main army.

CXLVII.

*Hd. Qr. Camp,
1st Feb. 1858.*

We were 7 and a half hours in the saddle this morning, and I am stiff and tired, so a very short note. Tomorrow we march 33 miles.

I pity the poor servants and have no little dread of it myself.

NOTE.—Sir Colin Campbell proceeded to Cawnpore by forced marches, taking with him the Cavalry and Horse Artillery. Hope's brigade with the artillery park started the same day by regular marches, Walpole remaining in Fatehgarh for a few days longer, as a rear-guard. The leading column marched 85 miles in four days, halting at and Chauthpar, Jalalabad and Araul.

CXLVIII.

*Hd. Qr. Camp, Chowbeypore.
3rd. Feb. 1858.*

Our march yesterday was reduced to 19 miles. To-day we came 25 and tomorrow go in to Cawnpore, where I expect we

shall have a long halt. A few days rest will be agreeable to all in Camp, for these forced marches day after day knock up every one. I find it too much for my old bones.

I hope you got safe to Agra to-day and are getting all in order for your march.

NOTE.—The halt anticipated proved longer than was intended, as it was not till the 23rd that the whole force had passed into Oudh. Apart from the extensive preparations necessary, the progress of the Eastern columns had to be watched. The Nepalese had occupied Gorakhpur and were now at Azamgarh. Franks was Singrauli, having re-established the civil authorities in the districts near Allahabad, and was preparing to advance on Sulampur. Accurate timing was a matter of high importance, but was rendered singularly difficult by the fact that the situation immediately confronting the several columns could not be determined.

CXLIX.

Hd. Qr. Camp, Cawnpore.

4th Feb. 1858.

We arrived here this morning, and such a scene of desolation as it is, you cannot conceive. I have been unable to go about yet, and shall not I fear for some days. I am very stiff and am again troubled with those wretched boils. I must keep quiet for a time. In the meantime we are pushing forward our preparations for our advance upon Lucknow. There is lots to do.

Sir Colin and I get on very well together, and shall I have no doubt continue to do so. He is a fine old soldier—a little peppery at times, particularly if any difficulties are thrown in his way. I am not likely to annoy him in that way. I have had a long chat with Brigr. Inglis to-day. He has had much to endure and I hope will soon reap his reward. I am glad you saw the good old Doctor. How I wish I had him here! I have been so busy all day with papers. I have hardly had time to write this hurried scrawl.

NOTE—Inglis, after his magnificent defence of the Residency at Lucknow, had succeeded to the difficult task of holding Cawnpore with a wholly inadequate force and of maintaining communications to the north, east

The Mutiny day by day.

and west. He had much fighting and was still far from secure. On this very day one of his outposts, under Lieut-Colonel P. V. Maxwell, C. B., of the 88th Regiment, who was at Bhognipur to watch the passages of the Jumna, was attacked heavily by a rebel force from Kalpi. He had under his command five companies of the 88th, two guns under Captain Talbot, R. A. and 50 Irregular Horse under Lieut. Thompson. After a running fight of four hours he succeeded in driving the enemy, who had suffered heavy loss, over the Jumna, his casualties being Lieut. Thompson and five men wounded.

The state of Cawnpore was truly appalling. The civil station had been destroyed at the first outbreak, and the same fate was suffered by the Cantonment after the unhappy surrender of the entrenchment by Sir H. Wheeler. The magazine had been blown into ruins, and after the arrival of Havelock the city had been wrecked and pillaged. In no place was the tragic horror of the Mutiny greater. Fearful as had been the murder of Europeans, even more terrible was the punishment meted out to the guilty city. This state of desolation made the use of the place as the main base of operations no easier, and rendered the question of supplies one of constant anxiety.

On the morning of the 4th, the 7th Hussars, with a troop of Royal Horse Artillery and the 79th Highlanders, under Brigadier Campbell, marched over the Ganges to Unao.

CL.

Hd. Qr. Camp, Cawnpore,

6th Feb. 1858.

The only news I have is that John has been ordered to join Tombs and come down here to be appointed Brigade Major of Horse Artillery. He will soon be happy. He has been abusing me horribly for leaving him behind. I have seen very little as yet of R. A. but I like Brigr. Barker who is a sensible man.

NOTE.—The appointment of Lieut. Frith has been already mentioned. Wilson, who apparently was too busy or too unwell to write on the 5th, had a very delicate task to perform in commanding a mixed Division of the Royal Regiment and Company's Artillery. He succeeded beyond expectation, and it was largely owing to his personality that the subsequent amalgamation, so far as the British units were concerned, was effected harmoniously.

CLI.

Hd. Qr. Camp,

8th Feb. 1858

Sir Colin went off to Allahabad last night to see the Governor Gen'l leaving me in command of the Troops on this side of the River.

* * * * *

10th Feb. 1858.

I received yours of the 7th this morning, and right glad I was to hear you had decided on marching with the Convoy. You never would have stood double marches all the way to Cawnpore. I shall address this to Mynpoorie.

Our forces are now nearly all collected and from all I can learn I think it probable, we shall commence our advance on Lucknow on the 13th.

* * * * *

NOTE.—Lady Wilson had by this time started on her journey, and in consequence the letters for a time become irregular. It was moreover very uncertain whether they would reach their destination. The progress of the convey was in fact arrested, not by actual attack, but owing to repeated rumours of threats from beyond both the Ganges and the Jumna. In consequence the advance into Oudh was deferred for several days after the projected date.

Lord Canning had left Calcutta in the third week of January and arrived in Allahabad on the 9th Feb. He thereupon abolished the office of Chief Commissioner of Agra, and himself took over the administration of the whole of the North-Western Provinces, less the Delhi Division; adding to his charge the Central Provinces on the departure of Mr. J. P. Grant to assume the post of President of the Council at Calcutta.

On the preceding day Brigadier-General Hope Grant with his column arrived at Cawnpore, bringing with him the convoy from Agra and its escort; the latter comprising H. M. 38th Regiment, a detachment of Wale's Horse and some Bappers.

On the 8th Hope Grant crossed the Ganges with a troop of Bengal Horse Artillery, the 9th Lancers and the 1st European Fusiliers. He proceeded to Unao, whence the column under Colonel Campbell advanced to Bashrataganj.

11th Feb. 1858.

Just a few lines to say I have received your's of the 8th, and to tell you to have no fears, for from all accounts the road to this is perfectly safe. The Rebels who were on the left Bank of the Ganges have retreated from thence. Nena Sing has separated himself with 8000 men from the Oude Mutineers, has given up a Lady with some children he had in confinement and has promised to do his utmost to save and give over those in Lucknow, and is now anxious to act for us against the Mutineers. This will make our work easy, for the other Landholders will follow his example, and the Rebels will be left helpless without pay or food. That wretch the Nana managed to cross the Ganges last night with one or two followers and is off to Calpee it is supposed, but he has now neither money nor followers and is in constant dread of being betrayed. He can do no harm and must soon be caught, if he is not so before they get across the Jumna.

I am very nearly well and hope to mount Mischief again to-morrow.

NOTE.—Wilson apparently refers to a quarrel which occurred between the Nana and Raja Man Singh of Shahganj, afterwards Maharaja of Ajodhya. While the report that the Nana had crossed the Doab in order to join the rebel force at Kalpi had some foundation, the definite secession of the astute Man Singh, who had been a persistent trimmer from the first, was at this stage nothing more than intelligent anticipation. The landlords of Oudh in several instances were wavering and many might have been won over, not out of loyalty but in their own interests, which from the first had been the main factor in determining their attitude. Doubtless there were some exceptions, but by this time the bulk of those who in self-protection adhered to the stronger side saw the beginning of the end and would have been glad to make terms but for the dismay caused by the famous proclamation of Lord Canning.

The Artillery Commandant had been very busy. On the 9th the 38th Foot with the 4th Punjab Rifles and 800 Sappers crossed the river, while on the following day he had to begin the heavy task of moving the artillery park. Two bridges-of-boats had been constructed: one opposite the entrenchment, now occupied by the Harness Factory, and the other some

way down the river, below the canal outfall. Even so the last cart was not across till noon of the 11th, and it was much later when all was in order at the Mangalwar camp. As escort to the park a strong force was sent over, comprising two companies Reserve Artillery, the 42nd Royal Highlanders, the 53rd Foot and the 93rd Highlanders.

CLIII.

*Hd. Qr. Camp, Cawnpore,
12th Feb. 1858.*

I wonder who that mischievous Officer was at Puttyghur, who wrote that 7000 men were threatening directly opposite Puttyghur and sending round shot into them all day. A telegraphic message from Seaton yesterday, says they were quiet, and not an enemy had come near them.

I had a talk with Sir Colin about your Convoy this morning and he promises to bring you down all safe. Should any danger threaten, Seaton has orders to move himself with his Column to your protection and Maxwell now at Ukburpore has orders to move his Force across country to Meerun ke Serai. Tombs' Troop will also if necessary be detrained to join Seaton.

I do not think you need have any cause to fear. The Park has all crossed, and moves on to-day towards Lucknow, and most of the troops have crossed. The Queen's Bays and a Troop of H. A. Royal have yet however to come up, and I cannot tell you where Sir Colin will cross. I am however, at last free of my boil, and ready for anything. I hope and trust we shall make short work of it at Lucknow.

* * * *

It was not the Nana, who crossed yesterday, only his nephew.

NOTE. — This was the son of Bala Rao, younger brother of the Nana, and generally known as the Rao Sahib. He joined Tantia Topi and from Kalpi he proceeded to attack all the loyal landowners in Bundelkhand. This move southwards made it possible for Lieut.-Colonel Maxwell to leave his outpost at Akbarpur.

The threat to the convoy of women and children was sufficiently circumstantial to induce Sir Colin Campbell, who had returned to Cawnpore

The Mutiny day by day.

on the 9th, to take immediate action. Walpole had reached headquarters on the 11th, bringing with him 800 Delhi Pioneers who had marched down the Grand Trunk Road. Two days later he was ordered to retrace his steps with a troop of Bengal Horse Artillery, a detachment of Hodson's Horse, the 2nd Battalion Rifle Brigade, and the 2nd Punjab Infantry to prevent any attempt on the part of the rebels to cross the river from Oudh.

Meanwhile the concentration was proceeding. On the 12th Hope Grant was joined at Unao by Peel's Naval Brigade, one company Reserve Artillery and the 53rd Foot, as well as the first division of the artillery park; the remainder following the next day with Adrian Hope's brigade as escort.

CLIV.

13th. Feb. 1858.

No letter from you to-day. I hardly expected one as you would be making your first march, but judge of my disgust at hearing this morning that Brig. Showers had again stopped you, after sending you out one march. This has upset all the Chief's arrangements, who had sent out a strong Column under Walpole to meet you, and keep the road open for you. I fear Showers has been inoculated by the tremblers at Agra. He might at all events have telegraphed his intentions before he issued his orders. We are detained here, and are likely to remain 9 or 10 days longer for several reasons, the chief of which is to give time for Franks and Jung Bahadour to come up and co-operate with us. This will give us 22,000 Infantry instead of only 10,000, we can only take from this. Another reason is, it will give full time for Gov'r. Gen'l's Proclamation to act before we appear before Lucknow. In the meantime Columns under Grant and Walpole will be operating on each side the Ganges to frustrate any attempt of the Nawa collecting a Force to cross and menace Cawnpore, as he did when the Chief crossed before to Lucknow.

* * * * *

I have to-day declined the Dinapore Command.

NOTE.—The delay in the matter of the convoy was particularly irritating because it involved the indefinite detention of the force with Walpole. In

order to settle such danger as might exist, the Commander-in Chief directed Walpole and Grant to act in conjunction on either side of the river; the ultimate object being to ensure the safety of the base during the coming operations. This was certain to be an anxious problem, owing to the persistence of the threat from the direction of Bundelkhand.

The question of the Proclamation comes up in detail in the following letter.

Wilson was fixed in his determination to end his active service as soon as the present campaign was over, and firmly refused each appointment offered him. He had won for himself a pension higher than he could ever have hoped to obtain, and this only served to strengthen his desire to return to the country of his birth.

CLV.

*Hd. Qr. Camp,
16th Feb. 1858.*

The only news I have for you to-day is, that Sir Colin showed me yesterday a letter from the Gov'r. Gen'l which argues against issuing any Proclamation granting Amnesty either to the Oude Landholders or the Mutineers. He argues that terror should be first struck into both by the capture and demolition of Lucknow. He is acting on this occasion against the advice and opinion of Sir John Lawrence, Outram, and the Com'r in Chief, and all wise people among whom I include myself, think he is acting very foolishly and is badly advised by those about him. That we shall take Lucknow there is no doubt, but we shall now meet with heavy loss which we cannot afford. So few Troops have been sent out that we have actually no Reserves to fall back upon, and I have no hesitation in predicting that Lord Canning by listening to those now about him, who breathe nothing but fire and sword and a war of extermination, is risking the safety of the Doab if not eventually of the whole of India. Without some hope of pardon, the whole of Oude will band against us, and be supported by Rohilkhand and Bundelkund. If the Proclamation which has been asked of him had been published, we should have had little else to do, but beat the worst of the Mutineers who are being driven out of Lucknow and would disperse from

The Mutiny day by day.

having no head to control them, and could easily be hunted down by the Civil Power as the 'Thugs were, Lord Canning has now, in my opinion, entailed upon the army work they will never be able to carry out, another hot weather campaign which will cut down our Troops by sickness until they are not fit to act, and the unsettling of the Country for the next two or three years.

Maun Sing who is now negotiating and willing to serve us to the best of his power will be forced back into the ranks of the Mutineers, and all who have acted against us will be driven to desperation, will hold together and fight to the last. I have here given you Dearest, what I never did before a Political disquisition, but I have been much annoyed at reading Lord Canning's letter and having a safe hand to give you this, I vent my annoyance by telling you my feelings on the subject. I hope I may prove a false prophet.

17th Feb. I heard from Pearson just arrived from Agra that he passed your Camp yesterday at Mynpoorie having halted after your two long marches, and that you were to be at Bewar to-day. From what I learnt from Sir Colin this morning I believe it is not his intention to leave this until he sees you all safe off to Allahabad. He is taking great care of you, and you ought to be all very grateful to him.

18th Feb. Yesterday the Chief received intelligence that Jung Bahadour was making delays in coming up to join us, and has told Macgregor he would cross the Gogra at his own pleasure. This looks *Fishy* and has given our Chief no little annoyance. Jung has a queer temper of his own and is evidently a difficult chap to deal with. I hope Macgregor will be able to soften him down. Sir Colin has received a letter from the Gov'r. Gen'l deploring the delay of our advance to Lucknow, but considers it better we should wait for Jung Bahadour to co-operate with us and, in the meantime, employ the troops in an endeavour to cut up the Nana and his followers.

This is already being done, as Grant marched two days ago with a column up the left bank of the Ganges to try and surprise him. This is all told me in confidence, and I tell you in the same way, but it makes me sure of seeing you again here before we advance. Will you be glad to see your old man again so much sooner than you expect?

20th. Feb. Intelligence has come to-day that Jung Bahadour was to cross the Gogra on the 19th. If this is the case I fear we shall soon move and all my hopes of seeing you will be overthrown. It will be a great disappointment to miss you after all my late expectations. This has been otherwise a white day for me. I have received a draft of 23,600 Rs—my six months batta, and I have also received a very handsome letter from Lord Canning enclosing others from Prince Albert forwarding my warrants as C. B. & K. C. B. Sir Colin Campbell has received the Insignia with orders to invest me. I do not yet know when the ceremony is to come off.

I. p. m. Just received yours of the 18th, giving me hopes of your coming on with the Scott's and surprising me either to-day or tomorrow. This will be indeed a white day.

NORR—Presumably no letter was written on the 14th or 15th. The meeting with Lady Wilson took place as anticipated, and was recorded by Lady Wilson in her diary. The stay in Cawnpore was brief, for the convoy continued its journey on the night of the 21st, proceeding by road to rail-head at Khaga in the Fatehpur district.

Walpole's Column returned to Cawnpore in detachments, between the 17th and the 27th. Meanwhile on the 15th the Queen's and "F" Troop, Royal Horse Artillery, under Brigadier D. Wood had reached Cawnpore, while the 3rd Sikh Irregular Cavalry marched in from Fatehgarh. On the next day Sir Hope Grant left Unao with a force to examine the country to the north-west, making Fatehpur-Chaurasi his temporary headquarters.

On the 17th the 75th Foot arrived to garrison Cawnpore, and the 3rd Sikh Cavalry proceeded towards Allahabad as an advance guard to the convoy.

On the Lucknow side the advance was proceeding steadily. Sir Edward Lugard with the 2nd Infantry Division pushed on successively to Nawabganj, Banni and Banthara, the final place of assemblage; the remainder being echeloned from Unao and Basharatganj onwards as a protection to

the parks and convoys of stores. The artillery park moved in three divisions a stage at a time.

The interesting feature of this letter is the appreciation of the political situation. It is clear that the Commander-in-Chief, whose one thought was of winning the war, held very different views to those of Lord Canning. He was strongly in favour of a Proclamation which would rally the landholders to the side of the Government and guarantee pardon to all save those who by their action had become definitely committed. The fact throws a new light on a vexed question, and destroys much of the foundations of the subsequent apologia of Lord Canning, the results of whose action were precisely those anticipated by the Commander-in-Chief and his Staff. Had Lord Canning remained in Calcutta and not attempted to interfere in the conduct of operations which were purely of a military nature, it is probable that the rebellion would have been crushed at Lucknow and a blow dealt to the mutineers which would have given a final impulse to the vacillating landholders of Oudh and Rohilkhand. It was easy enough to talk at Calcutta of conciliating the innocent and dealing out exemplary punishment to the guilty. These directions had been given before and the immediate result was the tragedy at Cawnpore. Feeling was strong and indiscriminating. All were held equally tainted, and the consequence was that the army was faced with a population entirely hostile because already condemned, instead of having to deal with the relatively small number of the actively disaffected, after securing the sympathy, if not the positive support, of those inclined to uphold the cause of law and order.

In this case Wilson no longer felt, as he had felt after the capture of Delhi, the hampering influence of the Political Department in the performance of a duty which he felt essential. Now the position was reversed. The military authorities advised a statesmanlike measure which would have reduced the magnitude of their task, a task for which the available means were all too meagre, whereas the civil officials urged a measure of vengeance and punishment which in effect drove the entire population of Oudh from sheer despair into the arms of the enemy. Doubtless the impelling influence was the party adverse to the claims of the taluqdars. The first summary settlement of Oudh had led, they argued, to the great rebellion, and the second was to give no further chance of a repetition of the process.

CLVI.

Hd. Qrs Camp, Cawnpore

24th Feb. 1858, 1 p. m.

You are, I trust all safe at Khaga, just starting in the train and will in a few hours be safe and sound at Allahabad.

If your luggage has come up there is nothing to detain you and Mrs. Greathed, and the sooner you start for Calcutta the better.

No news except a portion of Jung Bahadour's Troops have crossed the Gogra and licked some rebels who opposed them, taking some guns. This has put Jung in good humour and he promises to push on by forced marches. We shall soon, I hope, be all before Lucknow.

NOTE.—The Nepalese army under Maharaja Jung Bahadur, with Brigadier-General MacGregor as his Military Commissioner, left Gorakhpur on the 14th February and marched to Barari on the Gogra, which was reached on the 19th. The passage of the river was secured by Rowcroft who had joined hands with the "Pearl" Naval Brigade under Sotheby and on the 17th had captured the Fort of Chandpur with two guns. Rowcroft remained behind to deal with the rebels at Amorha and Belwa in the Basti district, while the Nepalese proceeded into Oudh, halting at Ambarpur and Mubarakpur, their route lying through Akbarpur in the Fyzabad district.

The action to which Wilson refers was that fought near Phulpur, in which the rebels under Ghulam Husain were defeated by Rowcroft, commanding the Saran Field Force, reinforced by the 2nd Brigade of the 1st Nepalese Division. This was on the 20th February, when it had become necessary to dispose of a rebel force, estimated at 2,000 men and 5 guns, which was endeavouring to bar the passage of the river. The action, which occurred on the right bank of the river, was completely successful, three guns being taken. As Wilson remarks, the result was most encouraging to the Maharaja, who took a personal part in the fight and actually laid a gun in one of the Nepalese batteries which blew up an ammunition wagon in the rebel lines. Immediately after this success a bridge-of-boats was constructed and the Nepalese troops effected their crossing.

CLVII.

*Hd. Qrs. Camp, Cawnpore,
25th Feb. 1858.*

The only news I have for you is another success achieved by Gen'l Grant at a place called Meeangunj, a walled town about a mile in circumference. He found a lot of rebels collected here, surrounded the place, knocked a breach in the walls, stormed it with the 53rd and killed 500 at the lowest computation.

The Mutiny day by day.

Our loss only 20 killed and wounded. A Captain of the 53rd dangerously. Capt. Jones, R. N., a Volunteer slightly. It appears to have been a very pretty affair altogether. Our Siege Train is now moving on and we shall soon follow.

My kindest regards to the Spottiswoods.

NORG.—The despatch to Sir Hope Grant gives a clear account of this successful action, and is reproduced in its entirety.

FROM,

BRIGDR. GENL. SIR J. H. GRANT, K. C. B.,

Comdg. Cavalry.

TO,

THE DY. ADJT. GENL. OF THE ARMY.

Camp before Lucknow, 5th March 1858.

SIR,

I have the honor to report that, on the morning of the 23rd February, I marched with the force named in the margin, to Meeangung, (with which I had been sent out to clear the country on the left bank of the Ganges, and along the main road from Cawnpore to Lucknow,) where I heard a Force of 2,000 Infantry had taken up a position in the Town with 300 Cavalry outside, and 5 or 6 Guns.

Artillery	..	..	326
Cavalry	..	..	636
Native Sappers and Miners	44		
Infantry	..	..	2240
			—
Total	..		3246
Siege Guns	..	..	2
Field Ditto	..	..	12
			—
Total	..		14

The Town was an old walled City with three strong gates, one leading to Lucknow, another to Cawnpore, and the third to Rohilkhand; at each of the gates were placed Guns behind strong breast-works, and these three sides were covered with trees. I reconnoitred and found on the North side an excellent position within 350 yards, where the 2 heavy Guns under Major Anderson, C. B., could be brought up, and a part of the wall in which was a postern gate beside a house called the Palace,

which could be breached. I immediately ordered up the 2 guns, placed the 53rd Regiment with the 38th in support, in rear of the guns behind a village. I sent the Cavalry with 4 Guns of the Royal Horse Artillery, to cover the Lucknow road; and the 34th Regiment, with two other Guns and a Troop of Cavalry, to cover the Baggage on the Rohilcund road. Major Turner's Troop of 9-Pounders, under command of Lieutenant Bishop, I placed on the right of the heavy Guns, to keep down the musketry fire from the walls of the Town.

In the space of 50 minutes, the 2 heavy Guns made a practicable breach, and I then ordered the 53rd Regiment to advance to the assault. They were formed into two columns;—one was to proceed to the left of the Town under Colonel English, the other to the right under Major Payue; this duty was performed most admirably by the 53rd; they approached the Town through some laues to the left; they rushed in at the breach, stormed the Town and took it; 6 Guns also were taken. Numbers of the Enemy were killed, and numbers tried to make their escape through the gates, but we were everywhere prepared for them, and altogether there must have been 500 killed and 400 taken prisoners. The Cavalry, Artillery and Infantry, on all sides, did their duty and gave me the greatest satisfaction.

I cannot speak too highly of the assistance I received from Major Anderson, C. B., Commanding the Artillery, from Lieutenant-Colonel J. Hagart, Commanding the Cavalry, and from Lieutenant-Colonel Sparks, Commanding the Infantry Brigades; also from Major Turner, Bengal Horse Artillery, and from Major Mitchell and Lieutenant Bishop, Commanding Troops of Royal and Bengal Horse Artillery; from Major Horne, Commanding 7th Hussars, and from Captain Anson, Commanding 9th Lancers; from Lieutenant-Colonel Kelly, (R. D.), Commanding 34th Regiment, and from Lieutenant-Colonel Kelly (T. C.), Commanding 38th Regiment; also from Lieutenant-Colonel English and Major Payue, 53rd Regiment, who so successfully Commanded all their Columns of

The Mutiny day by day.

assault, and from Captain Gough and Lieutenant Watson, Commanding Detachments of Irregular Cavalry; Lieutenant Dirom, Bengal Horse Artillery; Lieutenant Martin, 9th Lancers, and Captain Fendall, 53rd Regiment, Brigade Majors of Artillery, Cavalry and Infantry, were of the greatest use throughout the day. Lieutenant Warren, Commanding the heavy Guns, deserves great praise for the speedy and effective manner in which the wall was breached.

To my own personal Staff I am deeply indebted for their services. Captain Hamilton, Deputy Assistant Adjutant General, Lieutenant Roberts, Deputy Assistant Quarter-Master General, Captain the Honorable A. Anson, Aide-de-Camp, and Lieutenant Havelock, extra Aide-de-Camp. Captain Bruce, Head of the Intelligence Department, and Captain Evans, Deputy Commissioner, afforded me the most valuable aid in obtaining information on this as on every other occasion; Lieutenants Wilkinson and Hogge, of the Commissariat Department, exerted themselves to the utmost, and materially lessened the difficulties of the march.

I have &c.,

J. HOPE GRANT, *Brigdr. Genl.*,

Comdg. Cavalry.

The casualties in this engagement, which at once allowed the main force to move forward, were only two officers and 17 other ranks wounded; the former being Lieut. J. Brockhurst of the 53rd and Captain D. Jones, R. N., who was acting as extra A. D. C. to the General.

CLVIII.

Hd. Qr. Camp, Cawnpore,

26th. Feb. 1858.

Outram had another fight at Alumbagh yesterday and took two guns. I think we shall cross the River the day after to-morrow.

NOTE—The rebels at Lucknow were evidently getting desperate. On the morning of the 21st Outram had been attacked in force along his whole line

The Mutiny day by day.

145

and on both flanks. This offensive was checked, but the success could not be followe d up, as the Cavalry had been sent off to bring in a large convoy from Banthara.

A further attack was made on the morning of the 25th. This was a more serious affair, which may be narrated in Outram's words.

FROM

MAJ. GENL. SIR J. OUTRAM, G. C. B.,

Comdg. 1st Division,

TO

THE DEPUTY ADJT. GENL. OF THE ARMY.

Camp, Alum Bagh, 26th Feb. 1858.

SIR,

I have the honor to report the particulars of a repulse of a determined demonstration, which the Enemy made on our position yesterday the 25th Instant.

2. The principal attack was on our right, against which 24 Regiments of Regular Infantry, 6 Nujeeb Corps, 1,000 Cavalry and 8 Guns moved out from the trenches ; of this number about one-half, with 2 Guns, advanced towards our right rear, and having occupied the " topes " immediately to the East of Jellalabad, commenced shelling that post heavily, evidently in the hope of igniting the large quantity of combustible stores at present collected there, while the remainder held in support the villages and " topes " immediately in front of the Enemy's outworks.

3. Large bodies of Infantry and Cavalry, with 3 Guns, simultaneously menaced our left, and the trenches in front of our position were occupied in force.

4. Soon after 10 A.M., I moved out with detachments of Artillery, Cavalry and Infantry, as per accompanying Return, to intercept the Column which had opened its Guns on Jellalabad, having previously sent Barrow's Volunteers and Wale's Horse round, *via* Nowrangabad, to co-operate in the rear.

The Mutiny day by day.

5. As we advanced, a portion of the Enemy's reserve made a demonstration against our left ; but were speedily driven back, and afterwards held in check by the 4 Guns of Remington's Troops, supported by a Squadron of the 7th Hussars, under Colonel Hagart, and by Brasyer's Seikhs.

6. The Column then moved forward, flanked on the left by Brigadier Campbell with the Native Cavalry, which pushed on in advance to intercept the Enemy's retreat, which, owing to their having heard the fire of Remington's Guns, proved more sudden than we had anticipated. The manœuvre was completely successful, and speedily converted their retreat into a rout, Brigadier Campbell's Detachment assailing them on one side, while Barrow's and Wale's Horse appeared on the opposite quarter, and the Military Train, under Captain Robertson, dashed into the middle of the Flying Enemy, and captured their 2 Guns. The rapidity of their flight prevented the Infantry from taking a prominent part in the action. At 1 P.M., when we had finally left the field, the foe had vanished.

7. In the mean time the hostile forces on the left of my position had retired before the very effective fire of Moir's Guns, not liking the looks of the arrangements which had been prepared by Brigadier Franklyn, who had been left in Command of the Camp, for their reception.

8. Judging from the corpses which strewed the field where the Cavalry had charged, and from the dense masses on which our Guns repeatedly opened, the Enemy's Casualties must have been heavy. Our loss consisted of four men killed, five officers and twenty men wounded.

9. My cordial acknowledgments are due to all the Officers and Men who conducted and took part in these operations, but especially to the Military Train, whose brilliant charge excited the enthusiasm of all who witnessed it.

10. Colonel Berkeley, my able and zealous Military Secretary, whose knowledge of the ground was of great service to

Brigadier Campbell in cutting off the Enemy's retreat, was wounded while gallantly charging at the head of Hodson's Horse, as was Lieutenant Moorsom, while rendering to Barrow and Wale assistance similar to that which Colonel Berkeley afforded the Brigadier.

11. About 4 P.M. the Enemy again moved out against us. On this occasion they directed their principal efforts against our left, and evinced more spirit and determination than they have hitherto done. Repeatedly they advanced within grape and musket range, and as they ever met with a warm reception from our Guns and Enfields, especially from those of the left front picket, Commanded by Major Master,

*Information has since been received, which states the Enemy's loss throughout the day to have been between 400 and 500.

they must have suffered severely.* They renewed their fire from time to time during the night; but solely, I believe, with the object of covering the parties engaged in moving

their dead. Our loss in this subsequent operation amounted to one man killed and fourteen wounded. In all five men killed and thirty-five Officers and Men wounded.

12. The conduct of the Troops throughout the entire day and night were excellent at every point, and merits the highest commendation.

The usual Returns of Ordnance captured and casualties are hereby forwarded.

I have &c.,

J. OUTRAM, *Major General,*

Commanding 1st Division.

The officers wounded were Colonel, C. A. F. Berkeley, 32nd Foot, Chief of the Staff; Lieut. W. R. Moorsom, D. A. Q. M. G.; Lieut. Hugh Gough, Adjutant, Hodson's Horse; Lieut. Pierce Chute, 84th Foot; and Captain M. A. Inglefield, Military Train.

Since Part V was published, further information has come to light regarding the much-discussed Delhi controversy. In his memoirs Baird Smith plainly states that Sir Archdale

The Mutiny day by day.

Wilson was in favour of a retirement from the city after the assault. As already surmised, the authority for this tale was Baird Smith and, until imitators were found, none other. That the statement was the merest invention, whatever its object, is proved by the fact that in the copy of the book possessed by Sir Archdale, there is a marginal note in the handwriting of the General, who states:—"Such a thought never entered my head!" This is definite enough, for even his most bigoted detractors would have hesitated to call Wilson either dishonest or untruthful.

In order to complete Appendix I, printed with Part VI, the following extracts are added:—

No. 1050.

Foreign Department,

ALLAHABAD, *the 11th May 1858.*

The Right Hon'ble the Governor General is pleased to notify, that he has received from the Right Hon'ble the Lord High Chancellor of England the following letter, dated the 10th February 1858, transmitting certain Resolutions passed by the House of Lords on the 8th of the same month.

London, 10th February 1858.

TO HIS EXCELLENCY THE GOVERNOR

GENERAL OF INDIA.

MY LORD,

I have been ordered by the House of Lords to transmit to Your Excellency the accompanying Resolutions, and to request Your Excellency to communicate the same to the several Governors, Commissioners and Officers referred to therein.

I cannot discharge this duty without, at the same time, expressing the high gratification I feel in making this communication to Your Excellency.

I have &c.,

CRANWORTH, C.

HOUSE OF LORDS.

Die Lunæ, 8^o February 1857.

* * * * *

Resolved, Nemine Dissentiente, by the Lords Spiritual and Temporal in Parliament assembled.

That the Thanks of this House be given to His Excellency General Sir Colin Campbell, G. C. B., Commander-in-Chief in India; Major-General Sir James Outram, G. C. B.; Major-General Sir Archdale Wilson, Baronet, K. C. B.; and Major-General John Eardley Wilmot Inglis, K. C. B., for the eminent skill, courage and perseverance displayed by them in the achievement of so many and such important triumphs over numerous bodies of the Mutineers.

* * * * *

No. 1051.

The Right Hon'ble the Governor General, is pleased to notify that he has received from the Right Hon'ble the Speaker of the House of Commons, the following letter, dated the 17th February 1858, transmitting certain Resolutions passed by the House of Commons, on the 8th of the same month.

HOUSE OF COMMONS,

London, 17th February 1857.

TO HIS EXCELLENCY THE RIGHT HON'BLE

VISCOUNT CANNING,

Governor General, &c., &c., &c.

MY LORD,

In obedience to an Order of the House of Commons, I have the honor to transmit to your Lordship the enclosed Resolutions, which were agreed to unanimously by the House on the 8th Instant.

I have also to request your Lordship to communicate these expressions of the Thanks and Approbation of the House of

The Mutiny day by day.

Commons to the several Governors, Commissioners, Officers, Non-Commissioned Officers, Men and other Persons referred to in the said Resolutions.

I have &c.,

JOHN EVERLYN DENISON,

Speaker.

HOUSE OF COMMONS

Lunæ 8^o Die Februarij 1858.

Resolved, Nemine Contradicente,

* * * * *

That the Thanks of this House be given to His Excellency General Sir Colin Campbell, G. C. B., Commander-in-Chief in India; Major-General Sir James Outram, G. C. B.; Major-General Sir Archdale Wilson, Baronet, K. C. B., and Major-General John Eardley Wilmot Inglis, K. C. B., for the eminent skill, courage, and perseverance displayed by them in the achievement of so many and such important triumphs over numerous bodies of the Mutineers.

* * * * *

No. 1052.

The Right Hon'ble the Governor General is pleased to notify, that he has received from the Hon'ble the Court of Directors, the following Despatch No. 9, dated the 24th February 1858, transmitting certain Resolutions passed by the Court of Directors on the 10th, and by the General Court on the 17th of the same month.

Political Department.

No. 9 of 1858.

OUR GOVERNOR GENERAL OF INDIA IN COUNCIL.

We have great satisfaction in transmitting to you the following Resolutions which were passed by the Court of

The Mutiny day by day.

151

Directors on the 10th Instant, and by the General Court on the 17th Instant.

That the thanks of this Court be given to His Excellency General Sir Colin Campbell, G. C. B., Commander-in-Chief in India; Major-General Sir James Outram, G. C. B., Major-General Sir Archdale Wilson, Bart., K. C. B., and Major-General Sir John Eardley Wilmot Inglis, K. C. B., for the eminent skill, courage and perseverance, displayed by them in the achievement of so many and such important triumphs over numerous bodies of the Mutineers.

* * * * *

We are,

Your affectionate Friends,

ROSS D. MANGLES,

LONDON, }
24th February 1858. }

F. CURRIE,
And Nine Others.

FORT WILLIAM, 12TH FEBRUARY 1858.

No. 238 of 1858.—In continuation of G. G. O. No 1383, of the 5th of November last, the Honorable the President of the Council of India in Council is pleased to direct the publication of the following letter from Major-General Sir A. Wilson, Bart., K. C. B., late in command of the Delhi field force, forwarding reports from Lieutenant Colonel C. C. Deacon, Her Majesty's 61st foot, relative to the capture of the magazine in the city of Delhi, and from Major J. Brind, of artillery, regarding the occupation of the Jumna Musjeed.

2. His Honor in Council desires to record his approbation of the excellent services rendered by the officers above-named, on the occasions now brought to notice.

The Mutiny day by day.

No. 48.

FROM

MAJOR GENERAL SIR A. WILSON, K. C. B.,
Commandant of Artillery,

TO

THE DEPUTY ADJUTANT GENERAL OF THE ARMY,
Head Quarters.
Head Quarters of Artillery, Meerut 18th January 1858.

SIR,

I have the honour to forward, for submission to His Excellency the Commander-in-Chief, copy of a letter of the 9th instant, from Lieutenant Colonel C. C. Deacon, Her Majesty's 61st regiment, transmitting a statement of the operations against the magazine in the city of Delhi, which was gallantly and successfully stormed by a column under his command on the 16th September last, the circumstances connected with which, reflecting great credit on all engaged, were, I regret to find, omitted in my despatch of that date.

2. I also beg to submit a letter of the 24th September, from Major J. Brind, of the artillery, detailing the operations of a detachment under his command against the Jumna Musjeed, which led to the capture and occupation of that important post on the 20th idem; and I beg to bring this officer to Sir Colin Campbell's very favorable consideration, for his valuable services on this, as on every other occasion on which his energy and gallantry have been called into requisition.

3. I have to beg you will do me the favor of soliciting His Excellency to forward both these communications to Government with my request that they may be published in continuation of my despatches connected with the fall of the city of Delhi.

I have the honor to be, &c.,
 A. WILSON, *Major General*
Commandant of Artillery.

The Mutiny day by day.

153

FROM

LIEUTENANT COLONEL C. C. DEACON,

H. M.'s 61st Regiment,

Late Commanding Storming Party.

TO

BRIGADIER LONGFIELD,

Late Commanding 4th Column,

In reserve of Delhi Field Force, Delhi.

Ferozepore, 9th January 1858

SIR,

Having attentively perused the several despatches which have been recently published, before and subsequent to the assault on the city of Delhi, and observing that no notice has been made of the capture of the Magazine, beyond the fact of its having fallen on the 16th September last, up to which

250 H. M.'s 61st regiment commanded by Lieutenant Colonel Deacon.

200 4th Punjaub Infantry, commanded by Captain Wilde.

300 Belooch battalion, commanded by Lieutenant Colonel Farquhar.

H. M.'s 61st reduced to 170, no more men being available.

period it was the only arsenal in possession of the Mutineers of the Bengal Native Army: however late it may be, I feel it to be due to that portion of the troops which formed the storming party then under my command, as per margin, to forward the annexed statement, with a view to your doing me the honor to forward the same to Major General Sir Archdale Wilson, K. C. B., for transmission to, and for the information of His Excellency the Commander-in-Chief and the Government.

2. I may, I trust, be permitted to bring to the Major General's and your own recollection, that although I was not the Senior officer at the time, that Lieutenant Colonel Farquhar, of the Belooch battalion, on the previous evening (the 15th September), requested permission to be allowed to waive his right of command in my favor, until after the capture of the magazine had been effected; and I trust I may therefore be permitted to lay claim to the honor of carrying out the Major General's instructions, and for which I received, in presence of H. M.'s 61st regiment, the Major General's congratulations on the success of my proceedings on the morning of the 16th September, about half an hour after the fall of the magazine to our arms.

I have &c.,

C. C. DEACON, *Lieut. Colonel,*

H. M.'s 61st Regiment,

Late Commanding Storming party.

STATEMENT OF LIEUTENANT COLONEL C. C. DEACON,

Commanding H. M.'s 61st Regiment, and late in command of the Force that assaulted and captured the Delhi magazine on the 16th September 1857.

In compliance with instructions to that effect direct, and personally, from Major General Wilson, commanding the Delhi field force, an attacking party
250 H. M. 61st regiment, reduced to 170, no more being available. as per margin, under my command, paraded, on the 16th September 1857, for the purpose
200 4th Punjaub infantry. of assaulting the magazine within the walls
300 Belooch battalion. of the city of Delhi.

The Mutiny day by day.

2. The force assembled in in the College gardens half an hour before day-dawn, and was immediately formed into a column of attack, headed by her Majesty's 61st regiment, supported by the 4th Punjaub infantry under the command of Captain Wilde, with the Belooch battalion under the command of Lieutenant Colonel Farquhar in reserve; and at day-break, having previously taken ground to the left flank, until the column was brought to face the breach which had been made the previous day, the attack commenced. Not a word was spoken, or a trigger pulled, until the stormers and the support had reached the summit of the breach and the magazine yard, when a cheer and a charge were given and made, on which the Enemy, taken most completely by surprise, fled precipitately, throwing down their port-fires at their guns. Several of them were bayoneted close to the breach, the others were closely pursued by H. M.'s 61st and the 4th Punjaub infantry. A party under Lieutenant Colonel Rainey, H. M.'s 61st regiment, (under the guidance of Captain H. W. Norman, A. A. G.) having passed through the magazine, turned to their left and spiked a gun, which was in position on the eastern wall of the city and which was pointed at the College garden battery. On being reached, the enemy fought very desperately. In addition to those who were killed within the magazine grounds, many were shot down beyond the walls and within the buildings which stand between them and the Palace.

3. On reaching the summit of the breach, two heavy iron guns (apparently 32-pounders) were found pointed at it loaded, one of which was temporarily spiked by Assistant Surgeon T. H. Reade and Color Sergeant Mitchell, both of Her Majesty's 61st regiment. Two 10½ inch (apparently) mortars were likewise found in position in the magazine grounds facing the College gardens. These were presently wheeled about, and a fire from them opened on the Palace and Selimghur.

4. So unexpected was the assault, that the casualties at the moment were most trifling, only one Private of Her Majesty's 61st regiment killed, together with three Privates and one Sikh of Captain Wilde's corps wounded.

5. Having successfully conducted the assault, I then sent Lieutenant Colonel Rainey, Her Majesty's 61st regiment, back to the magazine, requesting that he would convey my wishes that the Belooch battalion should retain possession of it and man the walls, until the return of Her Majesty's 61st and the 4th Punjaub infantry, which was accordingly done; and on the force being again concentrated, Lieutenant Colonel Farquhar, as the senior officer present, assumed the command; the 4th Punjaub infantry, in compliance with previous orders, having proceeded to the College.

6. I must beg leave to state, that on the present, as well as on every occasion, from the period the left wing of Her Majesty's 61st regiment, under the command of Lieutenant Colonel Rainey, joined its head quarters, I have ever received that officer's ablest assistance and co operation; that the

The Mutiny day by day.

155

4th Punjab infantry nobly supported Her Majesty's 61st at the assault; while to Lieutenant Colonel Farquhar and to Captain Wilde I am much indebted for the able assistance they rendered me in carrying out Major General Wilson's orders.

7. I have only to add, that some 170 odd guns, of kinds, together with stores of all descriptions, were found in the magazine; that during the course of the fore and afternoon of the 16th September, attacks were made by the enemy, which were repulsed on every occasion, and at every point, by the troops then within the walls, under the command of Lieutenant Colonel Farquhar, and some loss was sustained, casualty lists of which were sent in at the time; but throughout, nothing could have surpassed the ardour and gallantry of both the officers and men who were engaged in the assault, and who I had the honor and good fortune to lead.

I have &c.,

C. C. DRACON, *Lieutenant Colonel,*

Her Majesty's 61st Regiment,

Late Commanding Assaulting Force.

FROM,

MAJOR JAMES BRIND,

Commanding Foot Artillery,

Late Commanding at Jumma Musjeed,

TO,

MAJOR EWART,

Deputy Assistant Adjutant General,

Dereah Gunj, Delhi, 24th September 1858.

SIR,

Understanding that reports of services performed by detached commands or special duties are to be made direct to you, for the information of Major General Wilson, Commanding the Delhi field force, I have the honor to submit the following.

On the morning of the 20th instant, about day-break, I proceeded to the Burn Bastion to ascertain that the guns were provided with sufficient ammunition, details, &c. &c. After firing upon the flying enemy along the front of the Ajmere Gate, and towards the woods in rear of Kisshungunj, it was reported that a rapid advance on the Jumma Musjeed would place it—and from its commanding position, the rest of the city—in our possession. Brigadier Jones was on the spot, but as he required Captain Boyd, commanding the 2nd Fusiliers, to be ready to accompany him to the Ajmere Gate,

The Mutiny day by day.

I offered my services, having to accompany the artillery under my command

Artillery.

Two 9-inch mortars.

Two guns of No 17 light field battery

Infantry.

Fifty men of Her Majesty's 8th Queen's and 20 men of the 1st Bengal European Fusiliers, under command of Captain Bannatyne, 8th Queen's.

with the advance columns, and requested that the detachment as per margin might be placed at my disposal. Lieutenant Genneste, of the Engineers, with a party of the Sappers, volunteered to accompany me. By the aid of pressed guides, and two irregular cavalry

(Punjab) troopers, we occupied, one after another, the prominent posts leading to the Jumma Musjeed, such as the Kutwalee, Sonalee and Putteh-pore Musjeeds, &c. &c., without difficulty or accident, having merely to force the gates and slay a few rebellious or suspicious characters. On taking possession of the Jumma Musjeed, and making the necessary disposition of my artillery and infantry, I was compelled to have the Durwan (who treacherously led a Sergeant of the 8th Queen's, Havildar of Coke's Punjab corps, and two regimental Bheesties under a heavy fire of musketry from the wall) of the Musjeed executed in the street to the front. The effect of these measures, together with the orderly and rapid movements of my detachment, had a most favorable result, and contributed towards the almost bloodless success of the military operations of the day, and the successful and complete occupation of the city, &c. of Delhi.

The steady, soldier-like, and determined bearing of Her Majesty's 8th regiment, under the command of that zealous and judicious officer, Captain Bannatyne, made my task light. During the night of the mutiny at Jullundur, when all were taken by surprise, and the rush upon our guns of the panic struck residents threw the troop into a state of inaction, I experienced the most cheerful and judicious aid from Captain Bannatyne who, on this occasion, so ably supported me. To Lieutenant Genneste, of the engineers, and the officers commanding the detachments of artillery, Lieutenant Wilson, H. A., and Lieutenant Harrington of Captain Bouchier's battery. I am much indebted for the valuable assistance they rendered me in the advance; as also to Lieutenant Sconce, of the same battery, who brought up a reinforcement. My detachment forced an entrance into the Jumma Musjeed about an hour and a half prior to the assault upon the Palace. I at once reported my position for the orders of the Major General, and made over the command of the post to Lieutenant Colonel Greadth the following morning.

I have &c.,

JAMES BRIND, *Major, Commanding Foot Artillery,
Late Commanding at Jumma Musjeed.*

CONCERNING FIGHTING ON THE N.E. FRONTIERS.

By Major A Vickers, 48th Pioneers. Comdt. 3rd Assam Rifles.

The country and the people on the North East frontiers of India are as different from those on the North West as the proverbial chalk from cheese. The same may be said of warfare on the two frontiers.

Although the tactical and strategical problems are not so formidable in the East as in the West, the history of our military operations against the Bhutanese, the Nepalese, the Burmans and the Abors will soon convince the student that jungle fighting is an art which requires special study and training to ensure success.

To those military officers serving in the local forces which picket the wild and inaccessible frontier tracts inhabited by divers and little-known savage tribes, of the head-hunting variety, the truth is quickly brought home that it is unwise to make war against these people without special training at the hands of those who have been and have seen.

Regular battalions triumphant in the field of modern war and proud of their tactical knowledge and experience of frontier fighting on the Afghan borders would at first be at a loss how to proceed and would have to "find themselves" anew under the novel conditions of the N. E. frontiers.

The experiences of the Military Police battalions which have made a life study of war in the eastern jungles, where they are in perpetual touch with active service conditions, may be of interest if not of value.

Inaccessible mountains, clad in vast and dense jungle, formidable rains and terrific floods, illusive and mobile enemies, are the main characteristics that claim our attention.

The recent operations against the Kuki tribes of the Assam and Burma frontiers in 1917, 1918 and 1919 were carried out by some six thousand local frontier troops of the

Burma Military Police and Assam Rifles. They were engaged in an area of 6000 square miles of almost inaccessible country during all seasons the year. These were the most extensive and formidable operations on the N. E. frontiers for many years. They were an enrichment in the knowledge of jungle warfare. A detail of the various methods of fighting among the different peoples and tribes is beyond the scope of this article. It will suffice to state that in all cases they endeavour to impede your progress with barricades, varying from a light fence of thorns to a solid stockade with an earthen parapet proof against the magazine rifle. Their weapons are a plentiful supply of Tower muskets and similar antique fire-arms, very useful and effective in close jungle ; bows and poisoned arrows ; spears for throwing and spears to thrust, also various forms of knives and axes such as kukris and daos. Little surprises there are too in the shape of pits cunningly concealed and planted with needle-pointed stakes to impale the victims. There are also stone shoots of the booby-trap variety, launching rocks the size of a house from hundreds of feet above you which add to the vicissitudes of the march on the khud-side. Collectors of curios may rejoice to find on the battle-field amazing leather cannon lashed to the forks of trees.

Military operations we must consider under two distinct heads :—

(1) Columns.

(2) Contact.

(1) *Columns.* The most difficult undertaking in jungle warfare is the command of a column against an enterprising enemy.

The officer commanding a force within striking distance of the enemy has no business to crawl about the jungles with a vulnerable column. For a column moves in the jungle, groaning under its impedimenta, to place the troops within striking distance of the enemy. It then halts and defends

itself with a minimum of rifles, thus releasing as many troops as possible for contact work. A column untrained to the job, moving in single file on a tortuous and difficult path, with a long line of animals or coolies carrying rations, ammunition, hospital gear, quartermaster's stores and kits, can quickly be thrown into confusion by a small party of the enemy. The defensive power of a column decreases in proportion to the amount of baggage to be protected. The transport of a column is the enemy's favourite objective. Quickly thrown into confusion, it requires steady and experienced troops to avoid "regrettable incidents" if the enemy is in the least bit enterprising. Practise your column, therefore, on the march with transport and all impedimenta before you commit yourself to the enemy's country.

Hard and fast rules of procedure must be adhered to and everyone must know his part perfectly and stick to it.

Every officer who has actual experience of jungle warfare will have a method of his own. A faulty method adhered to and carefully taught is perhaps better than a happy-go-lucky advance into the "blue".

The following few hints for columns may not be found in the text books but are, I venture to think, beyond dispute.

- (a) All troops and transport to keep to the path, in single file, except only the flankers of the advance and rear guards. The reasons for this are that if parties of men march in the jungle parallel to the column they will surely lose their position sooner or later and lose themselves for the rest of the day and possibly the night also. If within sight of the column their position off the track is of no value and they would be better on the path where they will not mask the fire of the main body and baggage guard, and where they are less likely to fire into other portions of the column when engaged with

Fighting on the N. E. Frontiers.

the enemy. The power of the magazine rifle is such that troops on the path will do more execution and give more confidence to the transport personnel than if they were out of sight in the jungle.

- (b) Flankers of the advance and rear guards should march in line, extended and level with the point which should remain on the path. Flankers should always be at right angles to the line of march, their progress being regulated by an officer or experienced N. C. O. with the point. They should keep their places and never shikar the enemy. The reason for the above is that the fire of the troops on the path should not be impeded by detachments wandering about on the flanks of the column in the obscurity of the jungle ; for if your flankers are in echelon from the point, or in single file parallel to the road, they must interfere with the fire from the path without in any way increasing their utility. Their object is to clear snipers and ambushes from the immediate vicinity of the line of march and this can be done best by flankers extended in line level with the point of the advance guard and at right angles to the line of advance.
- (c) Another axiom is to extend flankers in pairs at least. Men extended singly, when wounded in the jungle, have frequently been left behind and lost. Whereas men extended in pairs deal more effectively with snipers hanging round the fringes of a column and help each other in difficulties.
- (d) Let simplicity be your motto, the order for the day's march being as like those of yesterday as possible. Detail the same unit for advance guard for several days running to accustom them to the work till they do it automatically. The same applies to all other

portions of the column, *i. e.* the main body, the baggage guard and the rear guard. The old custom of detailing a new advance guard, etc. every day is not sound in jungle warfare, until the troops employed are old hands at the game.

- (e) It must be remembered that attack may come from any quarter. If it comes from the front the flankers of the advance guard will meet it. If from the rear the flankers of the rear guard will deal with it. If from the right or left of the column, then the troops in file on the path can deal with it by magazine fire without necessarily leaving the path.
- (f) Let us now visualise a column on the move as above. It is just a line of troops in file along the jungle path with a T-shaped head made of right and left flankers of the advance guard, and a T-shaped tail of right and left flankers of the rear guard. Any other troops belonging to the column and away from the path would be superfluous. Scouts and patrols are "another story"; they should not be regarded as part of a column, and should keep out of the way.
- (g) Troops when halted in file on the path should be taught as a matter of routine to turn to the right and left by alternate pairs so that both flanks are kept under observation and a demonstration on either or both flanks can be immediately checked by fire.
- (h) The method of reinforcing any point of the column by detachments from its main body requires consideration. Do not despatch your reinforcements into the "blue", or rather the green, the dense green obscurity of the jungle, to get lost, be shot by friends, and become thoroughly demoralised and ineffective. Rather send them in file along the path

Fighting on the N. E. Frontiers.

until opposite the point of attack. Then turn them into the fight "with a merry jest" and all will be well.

- (i) Train your transport in column work, teaching them to keep to the road and to keep quiet at all times. Untrained coolies will throw away their loads and vanish into the jungle when attacked, there to be cut up by the enemy awaiting them. Your coolies must be trained to realise, therefore, that the path is the safest place for them.
- (j) Finally, on reaching the place selected for the night, keep your column halted in silence on the path till your outposts from the advance guard are posted round the camp. Then make your perimeter. Then man your perimeter with the main body. Then move in the transport followed by the rear guard and all should be well.

(2) *Contact*.—Let us now suppose that our column has arrived in a position from which the enemy can be "got at". Here the column becomes a base in a snug perimeter camp, with formidable flanking defence, requiring but a small body of men to hold it. Then we proceed to "get at" the enemy. This is contact work, and very strenuous. Troops cannot cope with jungle tribes on the war-path until they have learnt to operate without baggage or transport for four or five days.

The organisation and training of flying "contact platoons" in this way is all important. The degree of their efficiency will be the measure of the success of the operations. The Indian Officers of Military Police Battalions, being accustomed to commanding isolated detachments on the frontiers, are often very capable leaders of these contact platoons.

The most foolish thing the enemy could do would be to concentrate for attack upon a small force armed with magazine rifles. The result would be decisive. Unfortunately they

most of them know it. Consequently they split up into small bands of guerillas. The pursuit, surprise, attack and destruction of these elusive bands is the duty of our contact platoons. Local conditions and the political situation will of course influence the commander of a force in framing the plan of operations and the employment of his contact platoons. The most drastic and therefore the most effective, method is to piquet the enemy's country with a network of small stockade posts garrisoned by contact platoons, and rationed for six months at a time. Each post will be given its own area in which to burn all villages, destroy all crops, attack the enemy whenever found, keep him on the run and finally pass him on to the next area and its contact platoon. In this way guerilla bands are paid off in their own coin. They cannot rebuild their houses, cannot sow their fields or reap their crops. Their families are hiding in the jungles indefinitely, and they never feel safe—most unpleasant ! Result—they get fed up and throw up the sponge.

Contact platoons should work within a radius of ten miles from their post, supporting one another when required. A platoon of four sections, each of twelve rifles, can garrison its stockade with one section and shikar the enemy with three sections. Their comings and goings should be known to none but the garrison of the post. Lightness of equipment and rapidity of movement are essential.

To use a broad and easy generalization, jungle warfare is a Subaltern's rather than a General's war. The overhead machinery and the cumbersome, if necessary, impedimenta of normal warfare should, and must, be reduced to the barest minimum. Experience has shown that for practical purposes the headquarters can be kept down to a scale far below that prescribed by the text-books. A few senior officers who know the country, the tribes and their methods suffice to direct affairs with the all important assistance of the Civil and Political Officers.

PRINCIPLES OF TRAINING.

Lieut. J. Lawson, 27th. Light Cavalry.

The civilian instructor, or, as he is more commonly called, the school teacher, undergoes a course of specialized training after attaining a high standard of general education. As a result of this preparation he is able to teach efficiently any subject which he himself knows, for he has mastered the principles of teaching and so can analyse his subject, arrange it in the best form, and present it to his pupils in such a way that it can be easily learnt. Such a standard is very difficult of attainment, in the case of the N. C. O. instructor. This difficulty is got over, however, by aiming, not so much at training highly efficient instructors pure and simple, as at training efficient instructors in certain definite subjects which are limited in their scope. We train the army instructor to deliver a series of lessons, but to do this efficiently, he must have a knowledge of the principles underlying the arrangement and preparation of these lessons as regards method and sequence. We do not attempt to teach our instructors such abstruse sciences as logic and psychology, and can so attain a higher standard in all that goes to the actual presentation of the subject to the man. One consequence of this is that the army instructor works to a considerable extent from memory, and memory must be frequently refreshed, or what the instructor gains in experience will be counteracted by departures from principle due to his forgetting the correct arrangement. A good musketry instructor would not necessarily be a good bayonet fighting instructor, even though he might be able to use the bayonet effectively himself, because he might not know the best sequence of instruction to follow. Given time he might eventually turn out a squad of good bayonet fighters, but he would inevitably waste much time by not presenting the subject in the form most easily and quickly learnt by his men. But if he knows the principles he can draw up a good programme on which to work and the result will be very different for he is already proficient in the art of expression.

For the British Officer a knowledge of the principles of training is essential, for not only has he to train and refresh the memories of his N. C. O's., but he has to arrange the sequence of the instruction and supervise the training of the men. To do this effectively he must naturally have a thorough knowledge of the subject in all its details, and he should also have at least an elementary knowledge of the action of the human brain—how it learns, how it remembers, and how it reacts,—for it is on this knowledge that all the principles of training are based.

It may be argued that the training of instructors and arrangement of subject matter is done at the various schools of instruction and that, therefore, there is no necessity for the individual regimental officer to consider these abstract principles. The schools do not attempt to train all the instructors required by the army; they train the nucleus by which the instructional staff of the unit is in turn trained and so maintain a uniformity of system throughout the army. As regards the other point, the subject is certainly arranged under convenient sub-heads, and the programme carried out at the school gives the correct sequence. This programme, however, cannot be taken *in toto* and applied to the instruction of each and every squad. In the first place, it is drawn up for the training of instructors and so differs in vital respects from the programme required for the training of trained soldiers, or again, of recruits. The regimental officer must make out his own programme, and, while he follows the teaching of the schools, he must at the same time appreciate that training. He must decide exactly how much he has to teach and what standard he desires to attain, though in the latter consideration he will be bound by the time at his disposal and the standard of training already reached by the men; *e. g.* it will take less time to train a marksman as a first-class machine gunner than it would a third-class shot, and if the marksman happened to have some mechanical

skill it would take less time still. In order, then, to prepare his programme so that the maximum result can be obtained in the minimum of time, the officer must know the principles underlying the arrangement of the programmes carried out at the various schools.

Let us try to evolve these principles.

We show a man an object. The optic nerves convey a definite visual impression of that object to the brain.—its shape, size, colour. If we show another object an entirely different impression is created. Next we describe the object and, through the medium of language, the ear registers its impression. If the object is capable of emitting sound (*e. g.* a bell or a musical instrument) this aural impression is amplified. Finally we let the man handle the object and the sense of touch adds its quota to the previous impressions—he feels whether it is large or small, smooth or rough, hard or soft, and, by the amount of muscular energy necessary to lift it, whether it is light or heavy. Thus the brain receives its impressions through the senses, and the three senses mentioned are those with which we are most concerned, for they are most easily acted upon and in the course of our instruction it is by stimulating these senses that we are able to create an impression on the minds of our men. Thus we get our first principle of training: *Appeal through the senses.*

These impressions conveyed to the brain are stored in the mind or memory. Show a man an object which he has seen before and the mind immediately tells him that the mental impression which it created has been experienced before and he recognizes the object. On the other hand, ask a man about an object and he recalls the mental impressions which that object made. Thus we have visual imagery in which the appearance of the object is recalled, or, in other words, in which the visual impression created by the object is recreated in the brain. A common application of this is experienced

when we are doubtful as to the correct spelling of a word. We write it two or three different ways on a scrap of paper and immediately recognize which is correct for it looks right—its appearance has repeated a previous mental experience. In the same way we have aural imagery, the result of the sense of hearing. We forget a part of a phrase or quotation, but by repeating what we can remember, aloud if necessary, aural imagery is stimulated and the missing words supplied. Or to return to the former example; we repeat the spelling two or three different ways and only one sounds correct. Should our visual imagery fail, our aural imagery may supply the knowledge required. Similarly we have what might be termed physical imagery in which the purely physical experience is imagined,—the feel of the rifle in the hand, the knee against the saddle, or the muscular exertion necessary to carry out a certain movement; *e.g.* we forget the detail of the first motion in "Slope Arms". We take a rifle and find that we can carry out the movement and so reconstruct our detail which our visual and aural imagery had failed to do.

The different kinds of imagery are developed in different proportions in different people. One man may rely principally on visual, another on aural, and a third on physical imagery; *e. g.* in remembering a musical phrase one man tries to recreate the visual image of the music score, another hums or whistles the air, or goes to the piano and picks out the melody by aural imagery, and a third moves his fingers on the keyboard under the influence of purely physical imagery. In our instruction we aim at creating the strongest and most lasting image possible and so try to appeal to that sense which is most developed in this respect. But we can never be sure which image will be most lasting so we try to create as many images as possible. In this way, should a visual image not be created, an aural or physical image may, while if they are all three created, our teaching is not likely to be forgotten. This is our second principle: *Appeal through as many senses as possible,*

Suppose that a wrong impression has been created; then imagery will accept as correct what is in reality wrong, and the longer this false impression is allowed to remain, the more liable will the brain be to accept it as correct and the more difficult will it be to eradicate it and replace it by the correct image. For instance: a man spells a word wrongly. If this is immediately noticed and pointed out to him there may be little harm done, but if he habitually spells it wrongly, then the mental impression is strengthened every time he writes the word, and even after his mistake has been noticed he will be liable to lapse to the former spelling. Thus we must endeavour to create the exact impression which we desire to create and be continually on our guard against false uptake and ready to correct mistakes at once. From this it follows that we should invariably teach the correct method only, and except in very exceptional circumstances never show the wrong as what is *not* to be done, lest, by mischance, our demonstration of the wrong method should make a more effective impression than the right, and a false impression be created—This, then, is our third principle, which we may sum up as *Absolute accuracy*.

Even when the correct impression is conveyed however, in time it may be forgotten. Our object is to impart instruction which will withstand, not only the influences of time, but also those of excitement in battle. Otherwise, at the critical moment, all our training may be forgotten. We must carve deep on the tablets of memory so that in moments of stress correct action is automatic. The oftener an impression is created the stronger that impression becomes, so it stands to reason that we must create these impressions again and again until they are so well founded that they will endure. This is the difference between cramming and teaching, for while the knowledge acquired under the former system may enable us to pass examinations, it is of so transient a nature as to have no practical value whatever. Impressions follow each

other so rapidly without being confirmed that they do not last. To establish impressions we must have continued repetition and thereby we guard against any new false impression replacing the old correct one. Our fourth principle, then, is *Repetition*.

Under certain conditions the brain is more open to receive impressions than others. When the interest is aroused the man concentrates on what his instructor is teaching him and a much stronger impression is, in consequence, created. If, on the other hand, he is tired or not paying attention, it is impossible to produce a durable effect. We must make the brain of the man receptive if we are to obtain the best results—in other words we must sustain his interest, and this we try to do in several ways. Most outstanding in this respect is the personality of the instructor, which includes all his personal equipment: his bearing, his mental superiority over his class, his ability to command attention, his quickness to size up the mental attitude of his class, his powers of expression and demonstration. But this is an element which is beyond the scope of this paper. When the brain is tiring a change of subject has a beneficial effect, or a few minutes relaxation, whether in the form of a rest interval or games, also tends to revive the mental energy. So, in drawing up our programmes, we introduce as much variety as possible and as progress is made and the field of our instruction is enlarged, we can introduce more and more variety as we proceed. Neither is it sound policy to pursue each subject until the interest has begun to flag, for there must be a period when the concentration is gradually falling off before the instructor notices it. To avoid this we make our lessons short, if necessary breaking up what would normally be one lesson into two or more lessons and interposing lessons in some different aspect of the subject, so that the interest is maintained to the full throughout. The comfort of the class is another aspect which requires consideration, for the full mental powers cannot be exerted under

Principles of Training.

conditions of bodily discomfort. Thus we do not keep the class standing in the blazing sun in the hot weather nor in an icy wind in the cold: we do not keep them for long periods in strained positions lest the impression of muscular pain should be stronger than any we are capable of creating. The fifth principle, then, is to *Sustain interest*.

The object of all our army instruction is efficiency in war. Our training is carried out under peace conditions so the instructor must always try to visualise the war conditions under which he wishes to take advantage of that training. He must try to anticipate all the disturbing mental elements which may interfere with the mental reaction which he has learnt to expect to certain stimulations under peace conditions. The man in action is liable to be confused and nervous. He is under fire and the instinct of self preservation is urging him to lie down and seek his own personal safety under cover instead of going boldly forward. He looks to his neighbour and sees him fall—killed or wounded—and he becomes still less resolute. If, however, he has been accustomed, in the course of his training, to see his neighbour "made a casualty" this element will not have nearly so disturbing an effect as it would otherwise have. Similarly if he has been trained to expect the confusion of units which inevitably results during an attack, he will naturally obey the orders of the nearest commander instead of wandering about in search of his own unit. The more we can introduce battle conditions into our training the less novel will these conditions appear to the man and as a natural result, the less disturbed will he be mentally, the more normally will he act, and the more reliable will he be. From these facts we evolve our sixth principle, which is *Realism*.

Man is a reasoning animal and even the most illiterate is capable of following an argument if it is presented to him correctly and in sufficiently elementary terms. The reason works in a definite sequence and if we impart our instruction in that sequence it will be readily appreciated, whereas if we

depart from it we complicate the mental process, for the man's brain has to re-arrange the matter in the correct order before he can accept it. For instance: we desire to teach that as the altitude increases the sighting elevation required for the rifle for a given distance decreases. Let us arrange our lesson so that we follow the working of the reason. First of all we consider a hay stack. All know that the hay at the bottom of the stack is more tightly packed than that at the top. Similarly with the atmosphere although we cannot see it—all the air above is pressing on that below so that we find it most tightly packed, in other words, most dense, at the bottom or sea level. The nearer we get to the top the less dense will it be, so when we climb a mountain we reach a less dense atmosphere, so far we have established one point which the reason accepts, viz. that the atmosphere is less dense at high altitudes.

We may presume that our students know the effect of the resistance of the air on the bullet in flight, gradually reducing its velocity and thereby accentuating the "drop" due to the force of gravity.

If we point at a loosely packed bayonet fighting dummy we find that the bayonet penetrates a certain distance. If we then point at a tightly packed dummy with the same force we find that the bayonet does not penetrate so far—in other words the resistance is greater and the bayonet is brought to rest sooner. Similarly with the bullet in flight. If the air is dense it will have to overcome greater resistance and so its velocity will be more rapidly reduced. That is to say, it will take longer to reach a given point than in a less dense atmosphere. But the force of gravity is acting all the time therefore the longer the bullet is in flight before reaching the object, the greater will the "drop" be on account of gravity. We make allowance for the "drop" due to this force by sighting elevation: the more the "drop" the more allowance we have to make; the less the "drop" the less allowance. So we establish our second point, that the less dense the atmosphere, the less sighting elevation will we require for a given distance.

Principles of Training.

We have already shewn that the atmosphere is less dense at high altitudes so if we now ask the question whether the sighting elevation required for a given distance at the top of a mountain is more or less than that required at sea level we will probably get the correct answer. The students have discovered this for themselves and all we have done is to direct their line of thought and supply the material.

If, on the other hand, we start by the bare statement of fact that less elevation is required, it is not accepted by the reason and is simply borne in mind until it can be accepted. Next we say that this is so because the resistance of the air is less. The connection between these may be seen but the fact of the resistance being less is probably not accepted. This then has to be remembered until we can prove it to the satisfaction of the student. And so on, at each step we present a point which has to be accepted temporarily while the reason works back to the previous point and accepts that. The mental process is obviously much more complicated than it was under our first arrangement and it is equally obvious that the difficulty and the time required to teach the lesson are increased. This gives us our seventh principle: progression from the known to the unknown, or *Logical sequence*.

In the above example we have made each step in the argument a very small one and we have gone back to the most elementary knowledge with the exception of the action of the force of gravity, which must have been previously taught. In dealing with men of little education every step must be made as easy as possible to enable them to follow us. In dealing with the highly educated, however, the case is different. Here the brain has been developed and is capable of filling in the gaps of an argument provided the sequence is correct. In the above case in teaching educated students we should simply say, "The less dense the atmosphere the less resistance is there to the bullet and so the less sighting elevation do we require." The educated brain is able to construct the whole argument.

rapidly and the latter part of our statement is accepted almost as soon as it is uttered. "For this reason, at high altitudes, we require less elevation." The educated man already knows that the atmospheric pressure is less so there is no point in wasting time proving the fact. By thus omitting an occasional easy step in the argument we keep our audience on the *qui vive*; they have to pay attention or they may miss the point altogether. The result is that we not only save time, but we make a much stronger appeal. If we make our steps too easy, they find that they can easily follow us without concentrating and they only pay half attention. They are bored with our slowness in making our points and as a result we do not create nearly so strong an impression as we otherwise might. If we make our steps too big they find it difficult to follow—they take so long to construct the missing short steps that we have passed on to the next before they have completed the first. Sprawling over their fences they find the pace too hot for them and pull out of the running. Nothing whatever is learnt and the time spent is wasted, for the whole lesson must be repeated more easily if it is to be taught at all. In the preparation of our lessons, then, we have to size up very accurately the mental capabilities of our students. We aim at making our lesson difficult enough to keep them busily thinking all the time and still must guard against making it so difficult that they lose heart. This then is the eighth principle which we must obey: *Rate of progression according to mental standard.*

These are the most important principles of training according to which all our instruction should be carried out and our programmes of work arranged. Briefly summarized they are as follows:—

1. Appeal through the senses: all impressions reach the brain through the senses.
2. Appeal through as many senses as possible: multiple imagery makes for lasting impression.

Prinolples of Training.

3. Absolute accuracy: difficult to eradicate false impression: immediate correction of faults: always demonstrate correct method.
4. Repetition: creates lasting impression: guards against correct impressions being replaced by wrong ones.
5. Sustain interest: personality of instructor: short lessons: intervals of relaxation: comfort.
6. Realism: reproduce as nearly as possible conditions for which we are training.
7. Logical sequence: arrange subject in order of argument: proceed from known to unknown: "so and so is a fact, *therefore* some other fact is also true."
8. Rate of progression according to mental standard: keep class busily thinking all the time.

These principles are applicable to all training, whether it be the simplest of physical exercises or the most abstruse of abstract sciences. We must have them ever before us and should know them so thoroughly that we act almost subconsciously according to them.

REVIEWS.

"The position of the ex-service man-past-present-future".

By ex. Sergeant F. George, late the Sherwood Foresters.

(Published by W. May & Co. Ltd. 45 High Street, Aldershot).

The author's object is to place before the public the disadvantages suffered by ex-service men under our system of voluntary enlistment and short service, and to urge their claim to the provision of a life's career in the service of the State. Some suggestions are made as to how this might be done; and while they admittedly are not complete, they should serve to provoke discussion among those who, through ignorance or apathy, have given little thought to the immediate and future dangers attendant on the neglect of men who have given the best years of their life to the service of their country.

The subject is treated in three parts—the past, present and future. The first part, which occupies more than half the book, describes the difficulties of the author in obtaining employment when he left the Army. His experience and that of a few others similarly placed, led to the formation of a National Society of ex-naval and military men, with the object not of supplanting the officially recognised machinery for finding employment, but of impressing on the nation the necessity of assuring a career in Govt. Services and other services controlled or subsidised by the Govt. for a largely increased number of ex-soldiers and sailors, and of making better provision for the families of those who die or break down in health while serving. The outbreak of war brought the activities of the society to a standstill before much material progress had been made.

The remaining portions of the book show that little has been achieved since the war and suggest that the present neglect of ex-service men is likely, in the future, to break down the voluntary system, and to throw many disappointed men

into the clutches of extremists. Reference is made to the difficulties in the way of obtaining employment due to Trade Union rules. "If the State owes a duty to its fighting men Trade Unions must conform," and now, if ever, is the time to achieve this not only by legislation, but by enlisting the support of all who have served in the war before the spirit of comradeship has faded from their memories.

The author has dealt in a very able and temperate manner with a subject which in view of approaching reductions more than ever demands immediate action. It is to be hoped that his work will find the large public it deserves.

"Notes on Law and Procedure as applied to Courts Martial".

By Lt.—Colonel St. J. A. Cox, C. M. G. (Gale and Polden Ltd., London, Aldershot and Portsmouth).

The Military Courts Martial Committee, held after the War under the presidency of a distinguished Judge, recommended that the system, introduced during the War, of employing special "courts martial officers" should be continued. This suggestion has evidently, in spite of financial stringency, been adopted by the Army Council, as the author of this little work is described, on its title page, as being the courts-martial officer of the Aldershot Command. Holding this appointment, Lt.-Colonel Cox is in a position to see just where the shoe pinches and has produced a book which will be extremely useful to commanding and staff officers and presidents of courts martial. We are glad to see that warnings against several common errors, which we also have often met with, have been inserted. For instance, the officer framing a charge for disobeying an order is warned against saying that the accused "*refused*" to obey the order, instead of that he *did not obey it*. A verbal refusal is, as the author points out, not necessarily disobedience. Other common errors noted, and against which warnings are inserted, are the framing of charges for *both* desertion and

fraudulent enlistment when a soldier has left one unit to improperly enlist in another, framing charges under section 15 (2 a), "failing to appear etc.", when all the evidence necessary to support such a charge is not in the summary, the admission of hearsay by calling every N. C. O. to whom an offence has been reported to say so, etc. A very useful paragraph is that in which presidents are instructed as to how to put the proceedings of a court-martial together. Any one who, as a confirming or staff officer, has had to review courts-martial will remember cases where an ill-arranged and confusing mass of papers has come in to him and how much extra, and quite unnecessary, trouble has been caused thereby. It might be helpful, if, in any future edition of this work, some reference were made to the cases in which commanding and convening officers should seek the assistance of the Judge Advocate General's Department before trial is ordered. See K. R. 561-A and A. R. I. Vol. II, para. 26. It is surprising how often these provisions are overlooked and with what disastrous results. It is perhaps invidious to draw attention to small faults, but we have noticed two places in which, in our opinion, the book might be improved and we commend them to the author's attention in any future edition. In para. 42, where charges of "receiving" are discussed, the presumption raised by the possession of recently stolen goods (*i.e.* that the possessor is either the thief or a guilty receiver) seems to have been overlooked. Surely, in such a case, alternative charges of stealing and receiving would be proper even if there were no evidence of the actual receipt of the goods by the accused from a third party. The second clause of para. 92 (dealing with the admission of evidence of bad character before the finding) would be more complete if some reference were made to the cases in which evidence of the commission of similar crimes by the accused is admissible, as showing intention or as negating the defence of accident; *c.f.* M. M. L. Ch. VI, para. 22. These, however, are small defects and the book, as a whole, is both helpful and accurate.



BEFORE——AFTER

How one man lost his worried look

MANY a man feels worried without quite realizing the cause. His world is a dull, dim and grey one, and he is always straining to see. That's how the lines and wrinkles come. Good glasses, which "clear up everything" are like coming out of a mist into sunshine to any such person, and the ease they bring is soon reflected in a happy expression. But you can't get the best out of glasses without highly skilled optical service. **CONSULT**

Lawrence & Mayo, Ltd.

(INCORPORATED IN ENGLAND)



OPHTHALMIC OPTICIANS,

**Branches in the East: CAIRO, ALEXANDRIA,
DELHI, BOMBAY, CALCUTTA, MADRAS,
LUCKNOW, SIMLA and RANGOON.**

Head Office: 19, NEW OXFORD ST., LONDON.

Journal

OF THE

United Service Institution of India.

Published under the Authority of the Council.



SIMLA:

UNITED SERVICE INSTITUTION OF INDIA.

Published Quarterly.

Price, Rupees 2-8.

Printed by S. H. LIDDELL, Longacre, Simla.

All Rights Reserved.

United Service Institution of India

RULES OF MEMBERSHIP.

ALL officers of the Royal Navy, Army, Royal Air Force, Colonial Forces, and of the Indian Defence Force, and Gazetted Government Officers shall be entitled to become members without ballot, on payment of the entrance fee and annual subscription.

The Council shall have the power of admitting as honorary members the members of the Diplomatic Corps, foreign naval and military officers, foreigners of distinction, other eminent individuals, and benefactors to the Institution, not otherwise eligible to become members.

Life Members of the Institution shall be admitted on the following terms:—
Rupees 75 + entrance fee (Rs. 10) = Rs. 85.

Ordinary members of the Institution shall be admitted on payment of an entrance fee of Rs. 10 on joining, and an annual subscription of Rs. 10, to be paid *in advance*. The period of subscription commences on 1st January.

Subscribing members of the Royal United Service Institution, Whitehall, London, are not liable for entrance fee while the affiliation rules are in force.

Life members receive the Journal of the Institution post free anywhere, but ordinary members only in India. All members may obtain books from the library on paying V. P. postage.

Honorary Members shall be entitled to attend the lectures and debates, and to use the premises and library of the Institution without payment; but should they desire to be supplied with the Journal, an annual payment of Rs. 10, *in advance*, will be required.

Divisional, Brigade and Officers' Libraries, Regimental Messes, Clubs, and other subscribers for the Journal, shall pay Rs. 10 per annum.

Serjeants' Messes and Regimental Libraries, Reading and Recreation Rooms shall be permitted to obtain the Journal on payment of an annual subscription of Rs. 8.

If a member fails to pay his subscription for any financial year (ending 31st December) before the 1st June in the following year, a registered notice shall be sent to him by the Secretary inviting his attention to the fact. If the subscription is not paid by 1st January following his name shall be posted in the Reading Room for six months and then struck off the roll of members.

Members joining the Institution on or after the 1st October, will not be charged subscription on the following 1st January, unless the Journals for the current year have been supplied.

Members are responsible that they keep the Secretary carefully posted in regard to changes of rank and address. Duplicate copies of the Journal will not be supplied free to members when the original has been posted to a member's last known address, and not been returned by the post.

Members or Subscribers to the Journal, intimating a wish to have their Journals posted to any address out of India, shall pay in advance Rupee 1 per annum, to cover foreign postage charges, but Life Members who have left India shall not be liable for foreign postage on Journals.

All communications shall be addressed to the Secretary, United Service Institution of India, Simla.

Contributions to the Journal.

All papers must be written in a clear, legible hand, and only on one side of the paper. All proper names, countries, towns, rivers, etc., must, when in manuscript, be written in capital letters. All plans must have a scale on them.

Contributors are responsible, when they send articles containing any information which they have obtained by virtue of their official positions, that they have complied with the provisions of A. R. I., Vol. II., para. 487, and King's Regulations, para. 453.

Anonymous contributions under a *nom-de-guerre* will not be accepted or acknowledged; all contributions must be sent to the Secretary under the name of the writer, and the paper will, if accepted, be published under that name unless a wish is expressed for it to be published under a *nom-de-guerre*. The Executive Committee will decide whether the wish can be complied with.

The Committee reserve to themselves the right of omitting any matter which they consider objectionable. Articles are only accepted on these conditions.

The Committee do not undertake to authorise the publication of such papers as are accepted, in the order in which they may have been received.

Contributors will be supplied with three copies of their paper *gratis*, if published.

Manuscripts of original papers sent for publication in the Journal will not be returned to the contributor, unless he expresses a wish to have them back and pays the postage.

To
The Leading Clubs & Messes in India

PHIPSON & Co.,
LIMITED.

Wine Merchants.

Head Office:—BOMBAY.

Branches:—DELHI,

SIMLA,

KARACHI,

BAGDAD,

and BASRA.

Price List on Application.

United Service Institution of India.

PATRON.

His Excellency the Viceroy and Governor-General of India.

VICE-PATRONS.

His Excellency the Governor of Madras.
 His Excellency the Governor of Bombay.
 His Excellency the Governor of Bengal.
 His Excellency the Commander-in-Chief in India.
 His Excellency the Governor of the U. P. of Agra and Oudh.
 His Excellency the Governor of the Punjab.
 His Excellency the Governor of Burma.
 His Excellency the Governor of Bihar and Orissa.
 His Excellency the Naval Commander-in-Chief, East Indies.
 The General Officer Commanding-in-Chief, Northern Command.
 The General Officer Commanding-in-Chief, Southern Command.
 The General Officer Commanding-in-Chief Eastern Command.
 The General Officer Commanding-in-Chief Western Command.

MEMBERS OF THE COUNCIL, 1922-23.

Ex-officio Members

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. The Chief of the General Staff. 2. The Secretary, Army Department. 3. The Hon'ble Mr. Denys Bray, C.I.E., C.B.E. 4. The Adjutant General in India. | <ol style="list-style-type: none"> 5. The Quartermaster General in India. 6. The Director, Medical Services. 7. Col. Sir S. Crookshank K.C.M.G., C.B., C.I.E., D.S.O., M.V.O. 8. The Director, Military Operations—General Staff. |
|--|---|

Elected Members.

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. Major Genl. H. F. Cooke C.B., C.S.I., D.S.O. *2. Col. H. Rowan-Robinson C.M.G., D.S.O. 3. Mr. G. R. Clarke C.S.I., O.B.E. 4. Col. Sir P. O. Hambro K.B.E., C.B., C.M.G. *5 Col. H. R. Nevill, C.I.E., O.B.E. | <ol style="list-style-type: none"> *6 Lt.-Col. C.J.E. Auchinleck D.S.O., O.B.E. 7. Col. W. D. Waghorn, C.B., C.M.G. 8. Dr. G. T. Walker, C.S.I. *9. Lt.-Col. F. S. Keen D.S.O. *10. Major H. G. Martin D.S.O., O.B.E. *11. Major N. Radcliffe-Smith M.C. *12. Capt. J. G. Smyth V.C., M.C. |
|---|---|

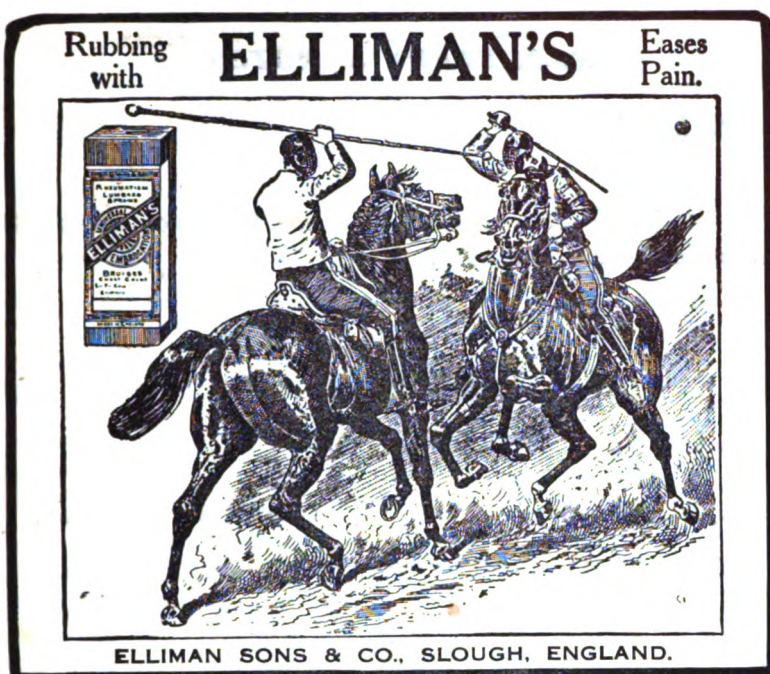
* Members of the Executive Committee and in addition

E. HAWARD, Esq.

SECRETARY & EDITOR
 SUPERINTENDENT
 LIBRARIAN
 BANKERS

..LIEUT. COL. F. A. FINNIS.
 ..S. SGT. E. F. CLARKE, I.O.D.
 ..MISS E. K. SUSSENS.
 ..ALLIANCE BANK OF SIMLA, LTD.

1. The United Service Institution of India is situated at Simla.
2. Officers wishing to become members of the United Service Institution of India should apply to the Secretary. The rules of membership are printed on the opposite page.
3. The reading-room of the Institution is provided with all the leading newspapers, magazines, and journals of military interest that are published.
4. There is a well-stocked library in the Institution, from which members can obtain books on loan, free. Suggestions for new books are solicited, and will be submitted to the Committee. Books are sent out to members V. P. for the postage, or bearing by railway.
5. The Institution publishes a Quarterly Journal in the months of January, April, July and October which is issued postage free to members in India and to all life members; but ordinary members wishing to have their journals sent to any address out of India must pay in advance Re. 1 per annum to cover foreign postage charges.
6. Members and the public are invited to contribute articles to the Journal of the Institution for which honoraria will be awarded by the Executive Committee. Rules for the guidance of contributors will be found on the opposite page.
7. **MEMBERS ARE RESPONSIBLE THAT THEY KEEP THE SECRETARY CAREFULLY POSTED WITH REGARD TO CHANGES OF ADDRESS.**
8. When on leave in England, members can, under the affiliation rules in force, attend the lectures and make use of the reading-room, etc., of the Royal United Service Institution, Whitehall, on payment of a subscription of 5 shillings per six months.



United Service Institution of India

JULY 1922.

CONTENTS.

1. Editorial.	178
2. The Mutiny Day by Day.	182
3. Wardens of the North-Eastern Marches.	246
4. Mechanism as a substitute for man power in Empire Defence.	250
5. Morale and Psychology.	253
6. Current Literature.	270
7. Reviews.	276

SECRETARY'S NOTES.

I.—New Members.

The following new members joined the Institution from the 11th February to the 15th June 1922.

LIFE MEMBERS.

Col. H. C. S. Ward.

Lieut E. D. Lawrence.

Lieut. W. Porter.

ORDINARY MEMBERS.

Major C. R. L. FitzGerald.

Lieut. E. Byers.

Capt. J. May Somerville.

Capt. C. A. Osborne.

Major H. G. Martin.

Capt. P. A. Meade.

Capt. U. MacGregor Greer.

Major A. Vickers.

Lt.-Genl. Sir E. S. Bulfin.

Mr. E. Burdon, I.C.S.

Lieut. C. C. Deakin.

Lieut. J. S. D. Lloyd.

Capt. R. Farrington.

Major-Genl. E. H. Willis.

Capt. P. J. R. Wigley.

II.—Examinations.

Books on Military History and Languages with Dictionaries are available in the Library and the following list of books, which is complete in accordance with the War Office list, may be found useful for reference by officers, studying for promotion examinations or entrance to the Staff College.

Secretary's Notes.

iii

MILITARY HISTORY. (SPECIAL PERIOD.)

1. *The Campaign of the British Army in France and Belgium up to 20th November 1914.*

A.—OFFICIAL ACCOUNT.

Sir John French's Despatches.

B.—OTHER BOOKS.

40 days in 1914 by General Maurice (new edition).

The Battle of the Marne, by G. H. Perris.

1914, by Viscount French.

General sketch of the European War, by Belloc.

The Great War, by Colonel Sedgwick.

My Memoirs, by Ludendorf.

Falkenhayn's book.

Von Kluck's book.

British Campaign in France, Flanders, by Conan Doyle, 1914.

Nelson's History of the War.

Ypres, by German General Staff.

Oxford pamphlets. August 1914. The Coming of the War, by S. Williamson.

Oxford pamphlets. August 1914. No. VII and X.

Times Documentary History of the War, Vol. V. Military, Part I.

" " " " " Vol. VIII Part III.

Der Grosse Krieg Schlacht bei Mons.

Der Grosse Krieg Schlacht bei Longwy.

2. *The Palestine Campaign.*

A.—OFFICIAL ACCOUNT.

A brief record of the advance of the Egyptian Expeditionary Force 1919.

B....OTHER BOOKS.

Allenby's final triumph, by W. T. Massey.

How Jerusalem was won, by W. T. Massey.

3. *Organization of Army since 1868.*

A....ORGANIZATION OF ARMY SINCE 1868.

History of British Army, by Fortescue.

Outline of Development of British Army, by Genl. Anderson.

Our Fighting Services.....by Sir Evelyn Wood.

B....FORCES OF THE EMPIRE.

The Statesman's Year Book.

Army List.

Articles in Newspapers and Magazines viz., R. U. S. I.

Army Quarterly, Journal of the U. S. I. of India, etc.

Secretary's Notes.**4. Development and Constitution of the British Empire.****A. THE BRITISH EMPIRE.**

Encyclopedia Britannica—(Contains much concentrated information).

The Statesman's Year Book.

Whitaker's Almanack.

The Colonial Office List.

The British Empire and its History, by E. G. Hawke.

The Government of British Empire, by Jenks 1918.

The British Empire (6 lectures) by Sir C. P. Lucas 1918.

The foundation and growth of the British Empire, by J. A. Williamson 1918.

The beginnings of English Overseas Enterprise, by Sir C. P. Lucas 1917.

The Government of England, by L. A. Lowell 1912.

The Expansion of the British Empire, by W. H. Woodward 1900
Overseas Britain, by E. F. Knight 1907.

The origin and growth of the English Colonies and of their system of Government, by H. E. Egerton 1903.

A short History of Politics, by Jenks 1900.

The English Constitution, by Bagehot 1909.

The Expansion of England, by Sir J. Seely 1883.

Introduction of the study of the law of the Constitution, by A. V. Dicey 1908.

England in the Seven Years' War, Sir J. Corbett 1907.

Selected Speeches and Documents on British Colonial Policy—
2 Vols. A. B. Keith, 1918.

B.—BOOKS ON SPECIAL PORTIONS OF THE EMPIRE OR WORLD.

The rise and expansion of British Dominions in India, by Sir A. C. Lyall 1894.

A brief history of the Indian Peoples, by Sir W. H. Hunter 1907.

The Nearer East, by Hogarth 1902.

Modern Egypt, by Cromer 1908.

The History of Canada, by W. L. Grant.

Nova Scotia, by B. Wilson 1911.

Report on British North America, by Sir C. P. Lucas.

The Union of South Africa, by R. H. Brand 1909.

Secretary's Notes.

v

Short History of Australia, by E. Scott.

History of the Australasian Colonies, by Jenks 1912.

The English in the West Indies, by J. A. Froude 1888.

The Lost Possessions of England, by W. P. Lord 1896.

5. Military Geography.

Naval and Military Geography of the British Empire, by Dr. Vaughan Cornish 1916.

Outlines of Military Geography, by Col. A. C. Macdonnell 1911.

Introduction of Military Geography, by Col. E. S. May.

Imperial Defence.....by Col. E. S. May.

Britain and the British Seas, by H. J. Mackinder 1907.

Military Geography, by Macguire.

Imperial Strategy, by Repington.

War and the Empire, by H. Foster.

Historical Geography of British Colonies (Dominions) 7 Vols. by Sir C. P. Lucas 1906-17.

Vol. 1 Mediterranean.

Vol. 2 West Indies.

Vol. 3 West Africa.

Vol. 4 South Africa.

Vol. 5 Canada.

Vol. 6 Australia.

Vol. 7 India.

The Influence of Sea Power on History, by A. I. Mahan 1890.

Historical Geography of the British Empire by Hereford George.

The Mastery of the Pacific, by A. R. Colquhoun 1902.

Frontiers.....by C. B. Fawcett 1918.

III.—Payment for Articles in the Journal

Articles accepted for publication in the Journal are paid for, and a sum of approximately Rs. 400 is awarded for articles and reviews published in each Quarterly Journal.

IV.—Contributions to the Journal.

With reference to Army Regulations, India, Volume II, paragraph 487, and King's Regulations, paragraph 453, as amended by Army Order 340 of 1913, intending contributors to the Journal of the United Service Institution of India are informed, that action to obtain the sanction of His Excellency the Commander-in-Chief to the publication of any article in the Journal of the United Service Institution of India will be taken by the Committee. Contributors are, therefore, responsible that the sanction of their immediate superior has been obtained, and this should be noted on all articles sent for publication. Articles need not be submitted in duplicate.

Contributors must have their articles either typed or printed.

2. It has been decided to introduce two new items in the Journal headed—

i. Criticisms

ii. Notes on current Military and Naval questions.

The rules for (i) to be—

That the criticism should be headed with the title of the article criticised, and the date of the Journal in which published.

That criticisms should be signed with a nom-de-plume, but that critics must disclose their identity to the Secretary.

The rules for (ii) to be the same as for Articles.

Instructions for the Preparation of Drawings and Plans for Reproduction by Lithography.

These should be in *jet* black. No washes nor ribands of colour should on any account be used.

If it is absolutely necessary to use colour (and these are only permissible in line work or names) the following will reproduce photographically, *i.e.* :—

Dark red, dark orange, dark green. No other colour should on any account be used.

V.—LIBRARY RULES.

1. The Library is only open to members and honorary members of the United Service Institution of India, members are requested to look upon books as not transferable to their friends.

2. No book shall be taken from the Library without making the necessary entry in the register. Members residing permanently or temporarily in Simla are requested to enter their addresses.

3. The United Service Institution of India is open all the year round—including Sundays—from 9 a. m. until sunset. Books may be taken out at any time provided Rule 2 is complied with.

4. A member shall not be allowed, at one time, more than three books or sets of books.

5. Papers, magazines, "Works of Reference" or books marked "Not to be taken away", or noted as "Confidential" may not be removed.

6. No particular limit is set as to the number of days for which a member in Simla may keep a book, the Council being desirous of making the library as useful as possible to members; but if after the expiration of a fortnight from date of issue it is required by any other member it will be recalled.

7. Applications for books from members at outstations are dealt with as early as possible, and books are despatched per Registered V. P. P. They must be returned carefully packed per Registered Parcel Post within one month of date of issue, or application made for permission to retain them for a further period. This will always be granted unless the book is required by another member.

8. If a book is not returned at the end of four months, it must be paid for, without the option of return, if so required by the Executive Committee.

9. Lost and defaced books shall be replaced at the cost of the member to whom they were issued. In the case of lost books which are out of print, the value shall be fixed by the Executive Committee, and the amount, when received, spent in the purchase of a new book.

10. The issue of a book under these rules to any member implies the latter's compliance with the rules, and the willingness to have them enforced, if necessary, against him.

11. A list of all books presented and purchased and also a list of books useful to members studying for the Staff College and promotion Examinations will be found, under Secretary's Notes, in the quarterly issue of the U. S. I. Journal. Members are invited to note any books which they think might with advantage be procured for the Institution. The suggestions will be placed before the Secretary.

12. Members are invited to contribute presents of books, maps, and photographs of naval and military interest. These may be addressed to the Secretary, U. S. I. of India, Simla. They will be duly acknowledged.

VI.—Library Catalogue.

Under Revision.

VII.—Gold Medal Prize Essay.

VIII.—Army List Pages.

The U. S. I. is prepared to supply members and units with manuscript or typewritten copies of Indian Army List pages, at the following rates:—

Manuscript, per page Re. 1.

Typewritten, per page Rs. 2.

IV.—Contributions to the Journal.

With reference to Army Regulations, India, Volume II, paragraph 487, and King's Regulations, paragraph 453, as amended by Army Order 340 of 1913, intending contributors to the Journal of the United Service Institution of India are informed, that action to obtain the sanction of His Excellency the Commander-in-Chief to the publication of any article in the Journal of the United Service Institution of India will be taken by the Committee. Contributors are, therefore, responsible that the sanction of their immediate superior has been obtained, and this should be noted on all articles sent for publication. Articles need not be submitted in duplicate.

Contributors must have their articles either typed or printed.

2. It has been decided to introduce two new items in the Journal headed—

i. Criticisms

ii. Notes on current Military and Naval questions.

The rules for (i) to be—

That the criticism should be headed with the title of the article criticised, and the date of the Journal in which published.

That criticisms should be signed with a nom-de-plume, but that critics must disclose their identity to the Secretary.

The rules for (ii) to be the same as for Articles.

Instructions for the Preparation of Drawings and Plans for Reproduction by Lithography.

These should be in *jet* black. No washes nor ribands of colour should on any account be used.

If it is absolutely necessary to use colour (and these are only permissible in line work or names) the following will reproduce photographically, *i.e.* :—

Dark red, dark orange, dark green. No other colour should on any account be used.

V.—LIBRARY RULES.

1. The Library is only open to members and honorary members of the United Service Institution of India, members are requested to look upon books as not transferable to their friends.

2. No book shall be taken from the Library without making the necessary entry in the register. Members residing permanently or temporarily in Simla are requested to enter their addresses.

3. The United Service Institution of India is open all the year round—including Sundays—from 9 a. m. until sunset. Books may be taken out at any time provided Rule 2 is complied with.

4. A member shall not be allowed, at one time, more than one book or sets of books.

The only real method of economy in military expenditure in India is a reduction in the number of bayonets maintained. Any other possible reductions merely amount to insignificant cheese—paring—the fighting troops cost the big bulk of the bill and are the only possible item that it is worth while considering. To calculate the strength of the Army required for India's defence is a moderately simple mathematical problem. There are certain factors threatening India's safety each of which can be calculated in terms of the men and guns available for the invasion of India. To meet this threat all that is required is to estimate the moral value of such forces and to supply the requisite number of units to counteract them.

The threatening factors to be calculated can be classed under three main heads:—

- (a) External.
- (b) Tribal factor within our border.
- (c) Internal.

To enable any substantial decrease to be made in the strength of the Army it is necessary to remove some of the above factors. It is obvious that India can have no control of factors which are outside India, and our liabilities under this head must remain. But (b) and (c) are capable, if not of elimination, at any rate of such improvement as may materially effect the strength of the Army it is necessary for India to maintain.

* * * * *

The problem of the N. W. F. has always been one giving rise to considerable controversy, and has recently obtained much publicity in the Press.

There can be no doubt that the unruly nature of the tribes within our borders is a factor calling for the frequent employment of military forces. Until therefore some steps are taken to establish control over them there is little hope of effecting

IX—Books.**BOOKS PURCHASED.**

Title.	Section No.	Author.
The Indian Year Book 1922 ..	O 281	Sir S. Reed.
Naval and Military Despatches (1914-1920).	M 988	"Official".
An English Wife in Berlin ..	N 528	Princess Blucher.
With the Russian Army 1914-1917 (2 Volumes).	M 989	Sir A. Knox.
Staff College Examination Report Camberley and Quetta 1922.	T 512	"Official".
Manual of Map Reading and Field Sketching (1921.)	T 513	"Official".
After the War (1922) ..	M 900	Colonel Repington.
The Framework of a Science of Infantry Tactics.	.. ..	Captain G. M. L. Hart.
The Rising Tide of Colour (1921) ..	.. ..	L. Stoddard.

BOOKS PRESENTED.

His Royal Highness The Duke of Connaught in India.	.. ..	In Reading Room	..
Sedition Committee 1918 ..	.. ..	do.	..
Co-operation in Germany and Italy ..	.. ..	do.	..
Studies in European Co-operation ..	.. ..	do.	..

(Presented by the Punjab Government)

Imperial Military Geography 1922 ..	T 510	J. Fitzgerald Lee.
Land Warfare ..	S 284	"Official".

(Presented by Messrs Wm. Clowes, London).

Operations in Waziristan ..	M 987	Compiled by G. Staff Branch A. H. Q.
-----------------------------	-------	--------------------------------------

(Presented by the Chief of the General Staff.)

Guide to a 2nd Class Certificate "Ruglish".	T 511	F. P. R.
---	-------	----------

*(Presented by Messrs. Gale and Polden Ltd., Aldershot.)***BOOKS ORDERED.**

The Last Four Months ..	Major-General Sir F. Maurice.
The Strategic Geography of the Great Powers.	Dr. V. Cornish.
Imperial Defence after the War ..	Lieutenant-Colonel Cottrell.
The Tragedy of Lord Kitchener ..	Reginald Viscount Escher.

X—Journals for 1920.

I SHALL BE GLAD TO RECEIVE FROM MEMBERS ANY SPARE COPIES OF THE UNITED SERVICE INSTITUTION JOURNAL, FOR JANUARY, APRIL AND JULY 1920.

The Journal

OF THE

United Service Institution of India.

Vol. LII.

JULY 1922.

No. 228

EDITORIAL.

European statesmen have been fervently seeking for some form of international machinery that will end war for all time. No one will disagree with the praiseworthiness of such efforts, but all men of sound common sense will realize that until the legal machinery which is to take the place of 'resort to arms' has been established and has proved itself, it would be sheer madness to anticipate the statesmen's efforts by reducing existing national safeguards.

History has been one long story of unpreparedness in regard to military affairs. It was this very military unpreparedness of Great Britain and America that led to the devastating war of 1914-18, from the effects of which the world is now suffering. The civilian is apt to imagine that it is the militaristic instinct of the soldier, the craving for new worlds to conquer, that leads to war. The truth is very much the reverse. It is the weakness of nations that leads others to prey upon them, and it is the civilian who is largely responsible for the wars that have been and still will be. Probably the best method of ensuring world peace would be the maintenance by the British Empire of an Army capable of giving the necessary weight to any diplomatic representations it may find it necessary to address to other nations.

* * * * *

We must therefore view with some doubt the reductions in the military strength of the Empire that have been forced on us by the need of retrenchment. We have seen how

the Empire has been burdened with enormous taxation due to our inadequate expenditure in pre-war days on defence, and doubt whether the steps now taken will lead to economy in the long run. We cannot take the optimistic view of some prominent statesmen that the Empire is immune from fighting for the next ten years. The world, and soldiers too, are without doubt sick of war and all its hardships and both desire a spell of peace that they may put their house in order. But there are nations whose part in the world war was negligible and who may think fit at any moment to seize the opportunity of preying upon neighbours whose weakness justifies the effort. It is a fact of nature which cannot be avoided, that the strong will prey upon the weak. Any desire therefore to reduce our military strength to such a standard as will lay us open to attack should be strenuously opposed, and the Empire taught at all times to be prepared.

* * * * *

India is faced today with the same problem as Great Britain, only to a lesser extent, that of an unbalanced budget. As in Great Britain so in India, expenditure in defence measures appears at first sight to offer greatest results to the retrenchment axe. But there is a difference and that a considerable one. England for the moment has at her call a nation trained to arms in the Great War, and a store of equipment capable of arming two million men and the risk therefore that England is taking may perhaps be justified in her present extremity. India has no such reserve of man power or equipment. Geographically she is, from the military point of view, in an inferior position to Great Britain, and any sign of weakness on her part would be not unlikely to cause her neighbours to seize the opportunity to attack her and thereby force upon her increased military expenditure which in the present financial state of the country is to be avoided.

The only real method of economy in military expenditure in India is a reduction in the number of bayonets maintained. Any other possible reductions merely amount to insignificant cheese—paring—the fighting troops cost the big bulk of the bill and are the only possible item that it is worth while considering. To calculate the strength of the Army required for India's defence is a moderately simple mathematical problem. There are certain factors threatening India's safety each of which can be calculated in terms of the men and guns available for the invasion of India. To meet this threat all that is required is to estimate the moral value of such forces and to supply the requisite number of units to counteract them.

The threatening factors to be calculated can be classed under three main heads:—

- (a) External.
- (b) Tribal factor within our border.
- (c) Internal.

To enable any substantial decrease to be made in the strength of the Army it is necessary to remove some of the above factors. It is obvious that India can have no control of factors which are outside India, and our liabilities under this head must remain. But (b) and (c) are capable, if not of elimination, at any rate of such improvement as may materially effect the strength of the Army it is necessary for India to maintain.

* * * * *

The problem of the N. W. F. has always been one giving rise to considerable controversy, and has recently obtained much publicity in the Press.

There can be no doubt that the unruly nature of the tribes within our borders is a factor calling for the frequent employment of military forces. Until therefore some steps are taken to establish control over them there is little hope of effecting

any great reduction in military expenditure arising from this factor, and yet in our opinion it is in the settlement of the N. W. F. problem that real economy lies. That the problem will be settled by failing to face our responsibilities, as advocated by some sections of the Press, is a delusion. There is only one solution to the problem and that is for India to impose her will on the people within her borders, so that with discipline and firm Government they may become peaceable members of the community, and this applies not only to the border but equally to the more enlightened persons in India proper, whose unconstitutional political activities are largely responsible for increased military expenditure under factor (c.)

* * * * *

The terms which have been offered to the surplus officers have now been announced and are generally admitted to be fair. Our sympathy however goes out to those who find their military career thus suddenly cut short. It is likely, however, that the number of voluntary retirements will be sufficient to enable the authorities to avoid resorting to compulsion except in the case of actually inefficient officers. Although from the point of view of those desirous of continuing their military career this is beneficial, it has from the larger point of view of the Indian Army as a whole, a somewhat alarming aspect.

The shortage of volunteers from Sandhurst has for some time pointed to the diminished attractions of Indian service, and the willingness of officers to accept the terms now offered and forego an Indian career is but another symptom. Financial stringency has however prevented any further improvement in the general conditions of service and officers and men have had to suffer in the interest of maintaining the Army at a sufficient strength to meet India's needs. It is useless to shut one's eyes to the danger that this policy may result in a deterioration in personnel.



MAJOR ARCHDALE WILSON, H.A. 1848.

From the painting by W. Richmond.

THE MUTINY DAY BY DAY.

BEING

EXTRACTS FROM THE LETTERS

OF

GENERAL SIR ARCHDALE WILSON, G. C. B.,
TO HIS WIFE.

EDITED BY COLONEL H. R. NEVILL, C.I.E., O.B.E., I.C.S.

PART VIII.

The Capture of Lucknow.

CLIX.

*Camp Oonao,
29th. Feb. 1858.*

At last we have broke ground and made our first march into Oude. As I was riding out of Cawnpore, your dear letter of the 25th was put into my hands with the enclosures from Eliza and Sally. I am very glad to hear you got on so well, and arrived all safe at Allahabad. Tomorrow will I hope, bring me a letter to say your Dawk is laid for Calcutta. The Trench's must have had hard work of it, with their heavily laden Brougham. I am all right again, Dearest. The dose I took put me right at once, and I have had no return. I shall however be liable to constant returns of this ailment if I am much exposed, and I shall be very glad to get down to Calcutta.

Sir Colin told me yesterday that if the Rebels bolted to Rohilcund after being driven out of Lucknow, he would follow them himself, but send the Hd. Qr. Staff either to Allahabad or some other place and that I might go as soon as Lucknow is taken.

We had a Telegraph from Franks yesterday, saying he had another fight with the Rebels on the 23rd at Sultanpore, had captured 20 guns, many of them large ones, and had killed and wounded 1800 of the enemy, that his own loss in his three

The Mutiny day by day.

battles had been only 2 killed and 12 or 16 wounded. 'This is a miracle I cannot understand, but it shews plainly the Rebels have had all fight taken out of them.

NORR.—Wilson was too unwell, owing to a threatened return of dysentery, to accompany Sir Colin Campbell, who on the 26th had marched from Cawnpore all the way to Bauthara. The next day the Commander-in-Chief rode to the Alambagh and held a conference with Outram.

The railway at this time was far from complete. A section was working from Allahabad to Khaga; but east of Allahabad there was a long break as far as Dinapore.

While the Nepalese army was making its way slowly but without serious difficulty towards Lucknow, the eastern force under Franks was encountering continual opposition.

On the 19th February he had marched from Singraiman into Oudh, his force consisting of the 6th Company 13th Battalion, and the 8th Company 2nd Battalion Royal Artillery, detachments of A Company 3rd Battalion Madras Artillery and the 4th Company 5th Battalion Bengal Artillery, 38 all ranks of the Benares Horse, the 10th and 20th Foot, the 97th Highlanders, and 115 Native Artillerymen, making a total of 2517. To these were added six battalions of the Nepalese army, bringing his whole force up to 5710 men and 22 guns of various descriptions. The three British regiments formed a brigade under Brigadier F. C. Eveleigh, C. B., of the 20th Foot, and a feature of this formation was the body of selected marksmen, 240 in number, from the units, who generally acted with the advanced guard and proved of the greatest value.

Franks was opposed by the rebel Nazim, Mahdi Husain, who was then at Wari with 10,000 men and 11 guns; the remainder of his force being with Banda Husain, the Chakladar, who had 8,000 at Chanda, ten miles to the north, with 8 guns.

Attacking the latter force without delay, Franks sent three battalions of Gurkhas to envelop either flank, and advance with the British brigade in the centre. The effect was immediate. The rebels fled, abandoning six guns, and the pursuit was maintained till the infantry were exhausted. Franks was very short of Cavalry, but had supplemented the troop of Benares Horse by mounted infantrymen of the 10th Foot, and these with the guns which galloped forward did great execution as far as Rampura, three miles beyond Chanda.

The force then rested, as it was learned that Mahdi Husain was coming up on the left. Near sunset line was formed in this direction at Hamirpur. The rebels were met with heavy fire which crumpled up their right flank, and an attempt to work round to the north was frustrated by the Gurkhas on our right under Colonel Pahlwan Singh. Mahdi Husain fled precipitately, but managed to save his guns. He had lost 800 men in two engagements on that day, the total casualties on the British side being eleven men wounded in the second action.

Franks halted on the 20th, being delayed by his baggage, and also having to discover the next move of the enemy. He had, if possible, to deny to the Nazim the fort of Budhayan, nine miles in front. By a feint towards Wari, however, he deceived the rebel leader, and on the afternoon of the 21st, having sent his baggage in advance, he seized the fort and there halted for his expected reinforcements in the shape of the much-needed cavalry.

Meanwhile Mahdi Husain moved to Badshahganj, the old cantonment of Sultanpur, lying two miles beyond that town. Then he was joined by Ghafur Beg, who commanded the Oudh artillery, with a large force of rebel sepoys and the troops of the Raja Husain Ali Khan of Hasanpur; the total strength being some 25,000 men with 25 guns.

The enemy held a strong position athwart the Lucknow road, stretching for a mile and a half from the Sultanpur bazaar to the serai at Badshahganj. The whole was protected by a deep and wide ravine, which the Lucknow road crossed by a bridge, and this was defended by artillery. Franks, however, discovered that the ravine could be crossed on the right of the rebel position, and forming as for a frontal attack, he rapidly inclined to the left and by an encircling movement cut off the line of retreat, save for the portion of the rebel force on their right, who at once retreated with four guns along the Lucknow road.

Cut into two, and forced into a position of defence with their backs to the ravine, the enemy resisted for a time and then fled in confusion. Their camp, 26 guns and a quantity of stores were captured, as well as the arsenal improvised by the Nazim at Badshahganj. The enemy loss was fully 1800, while that of the British force was but two killed and nine wounded. It was during this action that Macleod Innes, of the Engineers, won the Victoria Cross by capturing two guns in succession single-handed.

On the evening of the 23rd, after the battle, Franks was joined by the Lahore Light Horse and the Pathan Horse under Captain J. H. Balmain, and a day later the Jullundur Horse, better known as the 3rd Sikh Irregular Cavalry, under Captain F. R. Aikman, marched into camp. Had these reinforcements arrived two days earlier the defeat of the rebels would have been intensified.

The column continued its march on the 25th, and pushing forward with rapidity by way of Musafirkhana, Jagdispur and Haidargarh, reaching Salimpur, 18 miles from Lucknow, on the 1st March. On the morning of that day Aikman, who was in advance with 100 men, hearing that a body of rebels under the Chakladar, Musahib Ali, was within three miles of the road, attacked at once and brilliantly defeated a force of 200 cavalry, 500 infantry and two guns, capturing the last and killing some 100 odd of his opponents, the remnants being driven into and over the Gumti.

Aikman was wounded in this affair, but he was rewarded with the Victoria Cross for his daring and conspicuous gallantry.

The Mutiny day by day.

On the 3rd Franks was ordered to proceed to Lucknow. The following day he reached Amethi by noon, and sending on the main Column under Kvelegb, he himself attacked the fort of Dhaurahra with two guns, a squadron of the 9th Lancers and detachments of the Sikh and Pathan Horse. He found himself opposed by some 3,000 rebels, but most of them fled on the approach of the cavalry. The fort, however, was stubbornly defended. The marksmen companies and two howitzers were brought up, with the result that the fort and its guns were taken; but the survivors, who had barricaded themselves in a building, offered so protracted a resistance that Franks withdrew carrying off the captured guns. He had lost one man killed and eight, including Macleod Innes; wounded. This failure was unfortunate, for it marred to some extent the impression caused by a brilliant series of actions, and it is said to have deprived Franks of an important command for which he had been noted by Sir Colin Campbell.

The force reached Lucknow that evening.

CLX.

Hd. Qr. Camp,

1st. March 1858.

Buntharah.

Here we are 7 miles from Alambagh, our whole Force except Grant's Column collected. He is ordered to join also and as soon as he does I suppose we shall move forward and take up the ground we are to occupy before Lucknow. Jung Bahadour has crossed with all his Force over the Gogra, and is coming up, as quick as he can, but he cannot be before Lucknow before the 6th if he can then. I fear the business will prove a longer one than I bargained for.

The heat is becoming disagreeable, and the dust beastly.

NOTE.—Wilson, like many others, had greatly under-estimated the difficulty of rapid movement on the part of the Nepalese force. This army marched on the 26th February from Phulpur on the Gogra towards Akbarpur, and on the way information was received that a body of the enemy occupied a small fort at Birozpur, about a mile to the west of the road. Three companies were detached to deal with the place, but could effect nothing; the fort being surrounded, as usual with these mud strongholds in Oudh, by a dense bamboo hedge. Reinforcements were brought up and the place was attacked with artillery; but the obstacles still proved too great and it was not till the Maharaja himself had arrived that the fort was taken by storm.

in a very gallant fashion. The loss in this affair was 8 killed and 43 wounded, the total being greater than the entire enemy force, which was killed to a man.

From Akbarpur the Nepalese army proceeded to the Sultanpur district, following the road taken by Franks, who had cleared the way for them. On the 5th March, after leaving Mussirkhana, the force had to encounter the remnants of the rebel army under Mahdi Husain, who had taken up a strong position on either side of the Lucknow road with the object of denying to Macgregor the bridge over the Kandu Nadi. Captain Plowden, in military charge of the 2nd Gurkha division, having superior artillery, made a frontal attack and the rebels, who in this district showed little fight, soon fled. In the pursuit the Gurkhas did great execution, the enemy loss being nearly 600 killed and one gun: while the Nepalese casualties were but one killed and 16 wounded.

The force reached Jagdispur on the 6th, Haldargarh on the 8th, and reported its arrival at head-quarters on the 10th March, moving into line the following day.

On the 2nd March the General Headquarters, with the 2nd Division under Sir Edward Lugard, marched from Banthra to the Alambagh and thence along the rear of Outram's line past Jalalabad, which was used as the engineer park, to Dilkusha. To reach that point it became necessary to dispose of a strong picquet occupying the village of Gahli, and this was effected by horse artillery and cavalry, the enemy withdrawing with the loss of one gun. The Dilkusha Palace and the Muhammad Bagh were occupied without further resistance. At these two points were constructed the main right and left batteries of the position, which extended from the village of Biblapur on the Gumti towards Jalalabad. The line terminated two miles short of the latter place; the gap being entrusted to Hodson's Horse, now swollen into a corps 1600 strong.

The weather was already hot, but improved on the 2nd, as a sharp shower of rain fell during the march, and at least laid, for a time, the objectionable dust.

CLXI.

*Hd. Qr. Camp, Dilkusha,
3rd. March 1858.*

Shortly after I despatched my letter of the 1st, I received your dear one of the 26th Ult. You will before this I trust have arrived safely at Calcutta, and be comfortably settled.

On the evening of the 1st. the Hd. Qrs. with Lugard's Division, 3 Troops H.A. 9th Lancers and some Punjaub Cavalry

The Mutiny day by day.

got orders to march next morning. We moved off a little before day-break, and after passing Outram's position fell in with the enemy's picquets and drove them into the City, and then took possession of this Plateau. We might also have occupied the Martiniere as our guns drove all the fellows out of it, but Sir Colin would not, as he said it would take all his Force to hold it. He may be right, but I think it is a pity he did not send in a Regiment with a few guns, for seeing we did not occupy it, the Rebels came back there in large force and have been sniping at us from thence ever since. I brought up however 2 Guns which kept them at a respectable distance, and this morning I put 2 of Peel's 24 Prs to bear upon them, which makes us very snug in that quarter. The Rebels evidently did not expect us yesterday, for they had no guns in position on this side, and we took up our position with very little loss. Brig. Little is I believe the only officer wounded, (through the fleshy part of the arm) 2 sailors were killed, and I don't think more than 4 or 5 wounded in all the Force. About 2 hours after we had been here the enemy had got in their guns, and threw their shot clean into the ground we were going to encamp upon. This obliged us to move further back and tents were not pitched until 6 o'clock. The Troops all bivouacked. This morning it was the same thing, long shots from the Martiniere which do little or no damage. Franks' Column is within one March, and comes in tomorrow.

As soon as we can throw a bridge over the Goomtee, his Column crosses to the other side. We shall then commence work. The Enemy have however made very strong works, and it will take us, I fear a long time and some heavy loss before we can turn them out.

I have had a long kind letter from your old friend Major Macpherson, with a kind message from Aunt Bessie. I was stopped by some heavy firing, and on going out found the Rebels had brought out 3 guns to the corner of the Martiniere,

from whence they were pitching into Peel's guns and our Camp Followers, on the Bank of the River. Peel's guns however appear to have silenced them. By to-night I will have a Battery for 6 guns erected to keep them off.

NOTE.—The calmness with which Wilson writes during the operations against Lucknow contrasts strongly with the incessant anxiety he felt when engaged in the siege of Delhi. Here the conditions were very different. The Commander-in-Chief had at his disposal a magnificent army, far better equipped than any British force had been hitherto in India, and moreover moral supremacy had been definitely established. Wilson had now no private anxieties. He was confident in his abilities, which had been put severely to the test and had carried him through to triumph.

None the less, the task before the army was sufficiently arduous. The rebels were estimated at 96,000 strong, including the pick of the Bengal Army; they had 100 guns mounted in defence of the city, and their entrenchments for strength, depth and extent surpassed anything yet seen.

It was not till the Boer War that anything approaching these entrenchments, dug by the Oudh Pasis, were recalled, though doubtless in the Great War the art of defence was carried to a far higher pitch.

The main line of resistance was the Ghazi-ud-din Haidar Canal from Charbagh to the river. Behind this a second line stretched from the Hazrat-ganj Imambara to the Moti Mahal; while a third protected the mass of buildings known as the Kaisarbagh. In addition, all the main streets were strongly barricaded, and every important building had its system of defence.

The western flank was impracticable owing to the dense mass of houses and Napier, the Engineer in Chief, recommended attack from the East. The North, however, was wholly undefended, and Sir Colin Campbell determined to take the city by manoeuvre. His plan was, briefly, to attack the main position on the canal, and at the same time to send a division under Outram up the left bank of the river so as to threaten the rebel flank and rear, simultaneously holding the western side by the Alambagh force and the Nepalese. Complete investment was impossible, but it was hoped to close the gap on the north-west as the circle grew smaller.

The complete achievement of this plan would have exterminated the rebel army. In its actual execution it succeeded save for the fact that the encircling forces left gaps behind them on either side, large masses of the enemy eventually escaping by the Fyzabad and Shahjahanpur roads: a result which contributed materially to the prolongation of the Oudh campaign for another year and more.

An interesting point arises on the refusal of Sir Colin Campbell to occupy the Martiniere. Its advanced position would have committed him to a fully

The Mutiny day by day.

organised line of defence in this area; but this would have served his plan, in concealing from the enemy his intention as to the right flank, and in all probability it would have saved future casualties. Wilson admits it to have been an open question.

This letter makes it quite clear that Franks was intended for the command of the trans-Gumti Division, and this lends strength to the assertion afterwards made that the affair at Dhaureshra influenced the final selection.

Brigadier A. Little, 9th Lancers, commanded the 1st Cavalry Brigade, which comprised the 9th Lancers, 2nd Punjab Cavalry (one squadron,) and Wale's Horse. His wound compelled him to relinquish his command, which passed to Colonel Hagart of the 7th Hussars.

CLXII.

*Hd. Qr. Camp Dilkhusa,
4th. March, 1858.*

I have received yours of the 27th, giving me account of your safe arrival at Benares, and to-day got your Telegraph Message of arrival in Calcutta. This, Dearest, has set my mind quite at ease; you are now safe from every kind of danger.

We have done nothing more as yet. Franks has not yet joined us, but is somewhere close in our rear. Our Siege guns are all safe in Park, and the Hackeries with the shot and shell will be all in by night. Firing continues between our Battery and Picquets at the Dilkhusa House and the enemy at the Martiniere and their entrenchments on the Canal, a game of Long Bowls which Pandey is very fond of. We have been obliged to move our Camp back to get out of the way of their shot, several of which pitched into it but without any damage.

NOTE:—As already stated, the force under Franks arrived in camp this day, his troops being posted in rear of the main line. Walpole's division also was now complete. This comprised the 5th brigade, formed from the 23rd Fusiliers, 79th Highlanders and 1st European Fusiliers, under Brigadier J. Douglas, of the 79th; and the 6th brigade, with the 2nd and 3rd Battalions, Rifle Brigade, and the 2nd Punjab Infantry, under Brigadier A. H. Horsford, Rifle Brigade.

Wilson had been busy in supervising the artillery dispositions. He had completed the two batteries at the Dilkusha and Muhammad Bagh, and these were constantly in action. On the evening of the 4th the construction of two

The Mutiny day by day.

190

cast bridges over the Gumti near Bibipur was ordered, and these were finished the following day. The 24-pounders which were to be used for the bridge-head had already been brought down to the river bank and were employed against the Martiniere and any bodies of the enemy that appeared on the opposite side of the river.

CLXIII.

*Hd. Qr. Camp, Dilkhusa,
5th. March 1858.*

Our Bridge over the Goomtee is completed, but Franks' Force is not yet ordered over. Sir Colin is very anxious to get up Jung Behadour's Force if possible before he commences. He will then be able to invest the place almost completely, hence the delay.

The Rebels seem much disturbed at our Bridge and brought out a Force with 4 Guns to annoy us. We have however brought 4 heavy Guns to the river bank which keep them at a respectable distance.

I had another mishap yesterday afternoon. My horse (not Mischief) backed me over a bank and came down with me. I have however, with my usual luck escaped with a slight bruise or two and a little stiffness.

NOTE. As soon as the first bridge was completed, a strong picquet was thrown over and protective works were commenced. The enemy showed in force in a village about a thousand yards from the river, but ventured no nearer, being kept in check by the heavy guns. By midnight both bridges and the approaches were ready. Orders were then issued directing the Cavalry Division, less the 7th Hussars, Hodson's Horse, the Military Train, and a few detachments, to cross the Gumti at 2 a. m., together with Walpole's Division, three troops of Horse Artillery and two light field batteries; the whole under Outram, with Hope Grant second-in-command.

This was a surprise to Wilson, who, like others, expected that Franks would proceed on this errand; but Franks was ordered to move up into the line and occupy the position vacated.

Owing to the darkness of the night and the broken ground, the column lost its way and was nearly two hours late in reaching the bridge. Sir Colin, who was very anxious that this force should establish itself on the left bank unperceived, was furious, but his indignation was lost on the

The Mutiny day by day.

imperturbable Outram, who was clearly unable to get forward till day-break. The Commander-in-Chief was naturally impatient of delay, and his annoyance was increased by the slow advance of the Nepalese. His relations with Outram were never too cordial, and this little incident may have accounted in part for that apparent lack of confidence which had so important a bearing on the extent of the subsequent victory.

CLXIV.

Hd. Qr. Camp, Dilkhusha.

6th. March 1858.

The news of the day is that Gen'l Outram with a large body of Cavalry 2 Dragoons, 9th Lancers, and some 5 or 6 Squadrons, Punjaub Cavalry, 3 Troops, Horse Artillery, 2 Field Batteries and Walpole's (2nd) Division of Infantry crossed the Goomtee this morning at 3 o'clock. I have not yet heard an account of his operations, but he appears to have driven all the rebels who were on that side into the City, without any trouble. They must begin now to find themselves in a fix, now that they are surrounded on 3 sides. When Jung Bahadour comes up, they will be completely shut in. The heavy guns to be attached to Outram have not crossed yet, but are all ready, as soon as he has taken up his position. As soon as he is ready, which will I hope be the day after tomorrow we shall commence our attack simultaneously from this side and Outram's. I trust in a week after that we shall have taken the place.

The Queen's and Company's Artillery appear to get on very cordially together, and as far as I can judge they are all satisfied with me as their Commanding Officer. I have now a Madras Field Battery also under my command. It requires some little tact and judgment to carry on the duty so as to satisfy all parties.

NOTE. It would appear from this letter that Sir Colin Campbell still hoped to complete the investment of the city, and that he was only compelled to modify his intention by the delay in the arrival of the Nepalese contingent and the necessity for attacking the defended positions in greater depth than he had at first contemplated. He realised the importance of

finishing off the rebel army, but the large area involved rendered the denial of all outlets impracticable, and he was forced to conduct the operations to the best possible advantage with his limited resources. As it was, he had to face enormous odds in attacking a powerfully defended fortress, and no blame can be attached to the failure to perform more than was humanly feasible, beyond the ultimate ineptitude of the pursuit and the incomprehensible limitations imposed on the initiative of Outram.

Apparently the Commander-in-Chief expected too much from the early stages of the operations beyond the Gumti. As soon as his force had crossed the river, Outram found that the enemy in no way failed to realise the significance of this move. With his force drawn up in three lines, he advanced northwards for a mile or thereabouts, following the river bank. Then leaving the river, which here bent westwards, he proceeded straight in the direction of the city, only to find the enemy in force on his left flank. He at once attacked, the 2nd Punjab Cavalry on the right, and two squadrons of the Bays, one squadron of the 9th Lancers and D'Aguilar's Troop on the left. This measure drove back the enemy in haste on to their infantry positions, but in the pursuit Major Percy Smith, of the Queen's Bays, commanding the left attack, was killed and his body, despite gallant efforts, was not recovered till the following evening.

Outram after this skirmish advanced to the Fyzabad road and encamped in front of Ismailganj, facing the city which was some four miles distant from the position.

CLXV.

*Hd. Qr. Camp, Dilkhusa,
7th. March, 1858.*

Outram yesterday did very little, he did not advance more than 3 miles from our Camp, and had only a small skirmish. I have not heard the amount of his loss, but it is said that Capt. or Major Smith and several of the men are missing, supposed to have charged into the mass of the enemy and been cut up. This morning he has been engaged again, and from the sound of his and the enemy's Guns for more than an hour it would seem rather fiercely, no particulars yet received. His Heavy Guns are to cross to him this afternoon.

NOTE.—A sharp attack was made on the outlying picquets early in the morning, but this led to nothing, the picquets being withdrawn and the enemy driven off by a display of artillery.

The Mutiny day by day.

In order to secure the passage for the siege guns, the lower bridge was dismantled and moved down the Gunti to Bibipur, so as to be out of range from the Martiniere. It was reconstructed with great rapidity, and the 22 guns were moved over the same evening. They reached the camp at Ismailganj in the morning, and thereupon the 9th Lancers and D'Agnillar's Troop of Horse Artillery returned to headquarters.

The leisurely progress of events at this stage led to considerable criticism, but Colin Campbell was deliberately waiting for the arrival of the Nepalese. He had expressed his willingness to act without further assistance, but Lord Canning was emphatic on the necessity of avoiding any slight, real or apparent, on our allies, and the programme had to be adjusted accordingly. None the less, as is clear from the next letter, the Commander-in-Chief considered that Outram might have acted with more energy at this stage.

CLXVI.

*Hd. Qr. Camp, Dilkhusha,
8th March, 1858.*

Again I have little news for you, except that Jung Bahadour crossed his first Division over the Goomtee at Sultanpore on the 3rd and his second Division on the 4th. He cannot be here before the 12th, even if he makes the regular marches, which he does not appear over inclined to do.

The Rebels attacked Outram yesterday, and he drove them back, nothing more appears to have been done. The Chief has gone over this morning to his camp, to stir him up, and make him take a more advanced position. I trust they will to-day take the Chuckah Khottee on the Race Course, where the Rebels have an advanced Picquet and are entrenching themselves. I am left in command this side during the Chief's absence.

Major Smith's body was recovered yesterday, untouched by the Rebels. He had been shot through the heart. The story of several of the 2nd Dragoons being missing is untrue, they had only 2 men wounded. It is quite evident to me, this will be a long business and that I shall not get down to Calcutta in time for the 9th April Steamer. You, Dearest, must

not subject yourself to the heat of Bengal after that time. You must therefore, at once secure your Passage.

Sir Colin has returned, nothing to be done to-day. I have just received your dear letter of the 3rd.

I am so glad to learn you have got thro' your journey so well.

* * * * *
NORM.—On the 8th there was considerable activity at headquarters. No. 2 left Battery for six guns was constructed on the left front of the Dilkusha to bear on the Martiniere, and was manned by the Naval Brigade under Peel. Another battery, No. 3 left, with the same objective, was thrown up to the right of the Muhammad Bagh; and a third was made out the right front of the Dilkusha, each of these carrying four guns.

The Commander-in-Chief rode over the river in the morning, in order to make a personal reconnaissance of the position in front of Outram. He had already seen that the strong point newly organized by the rebels at the Chakkar Kothi must be captured before the main position could be turned or even attempted. The plan, which Malleson attributes to Outram, was that of the Commander-in-Chief, who was dissatisfied with a method of fruitless skirmishes.

It is odd that Wilson should make so clear a statement regarding the recovery of the body of Percy Smith. This is directly at variance with the account given by Forrest.

On the night of the 8th preparations were made by Outram for immediate action. His heavy guns were mounted in two batteries on the old race course, within six hundred yards of the rebel position, being dragged up to the emplacements by elephants.

CLXVII.

Hd. Qr. Camp, Dilkusha,

9th. March, 1858.

The news of the day is that Outram has taken the Chuckah Khotee this morning easily. And has therefore established himself on the left bank of the River, from which he will be able to enfilade the enemy's line of entrenchments on the Canal. We have been pounding at the Martiniere all the morning, and took it at 2 p. m. this afternoon. Tomorrow morning we shall open our Batteries from both sides of the River, on the Canal Entrenchment.

The Mutiny day by day.

NOTE.—Outram attacked from two points. On the right a column under Walpole was directed to operate north of the main Fyzabad road so as to take in rear the rebel battery defending that line of approach. This manoeuvre was successful, save that the enemy withdrew their guns intact.

At the same time Outram in person led the column on the left across the stream known as the Kukrel, his objection being the Chakkar Kothi. With the exception of a few who resisted to the last, the rebels fled and Outram passed on, through the Irregular Cavalry lines, to the Badshah Bagh, where he regained contact with Walpole. Manning the walls and houses on the river front, he was thus able to bring up guns which could enfilade the batteries in rear of the Martiniere. This action was entirely successful, as the works were abandoned and were secured by Hope's brigade, then in possession of the Martiniere, communication between the two forces having been established by Lieut. T. Butler of the 1st Fusiliers.

The capture of the Martiniere and the occupation of the river bank from that point to the Iron Bridge resulted in the enemy being taken in reverse. During the night the line of the canal was occupied as far as Bank's Kothi, beyond which Colin Campbell refused to permit any advance, in the absence of artillery preparation.

CLXVIII.

*Hd. Qr. Camp, Dilkhusa,
10th. March, 1858.*

I met with another nasty accident yesterday afternoon. Cantering over a bad piece of ground, Mischief made a shy at a log of wood, missed his footing, and came down like a shot, throwing me on the hard Penhali, and very nearly coming on top of me. I have escaped most wonderfully with a few scratches and bruises, on my hands and knees. The left hand a little sprained: my sword guard was smashed to atoms, and my trousers all torn. I wonder I was not killed. It has however given me a good shake, but not incapacitated me from duty.

Our progress yesterday was very satisfactory. Outram took possession of the Badshah Bagh, and is shelling from that side the River. We took the Martiniere easily and the Highlanders made a rush and got over the Canal Entrenchment, and by night, we had firm possession of all the right of the Entrenchment, to within a hundred yards of Banks' House.

I have just heard (12 noon) that we have taken the latter. We now have a good base line inside their Entrenchments for our future operations against the Kaisir Bagh. Outram lost 2 officers. The only officer on our side hit was Capt. Sir Wm. Peel, a flesh wound only, through the thigh. It will however lay him up for a month or six weeks, and he will be a great loss to us. We only had 8 or 10 men wounded yesterday, I believe. The Commander-in-Chief's Camp is now moving down to the Martiniere. Lucky for you, it is my left not right hand disabled. You would have got few letters.

NOTE.—Sir William Peel died, not of the wound, but of small-pox, as he had been removed in an infected doolie.

On the morning of the 10th, No. 4 Left Battery was opened in the Martiniere grounds against Banks' Kothi. A breach was effected and the position was stormed by Lugard's Highlanders. Thereupon Banks' Kothi became the site of No. 5 Left Battery, while other guns to the right of this position attacked Hazratganj and the Begam's Kothi. The bombardment was maintained incessantly till the assault of that stronghold on the 11th.

On the right Outram was engaged in consolidating the river front. He secured the Dilaram Kothi, whence a continuous duel was maintained with the Chatar Manzil, and all this day and the following night his troops were engaged in preparing batteries for the bombardment of the Kaisirbagh.

CLXIX.

*Hd. Qr. Camp Martiniere,
11th March 1858.*

Banks' House a very strong position was easily taken yesterday afternoon. Two officers were wounded yesterday. Flood A. D. C. to General Mansfield, one of them. This morning we surprised the Secunder Bagh without any loss and I hope during the day, we shall take possession of the Block of Buildings comprising the Begum's Palace, Jaffer Ally's and Humao Dowlah's house. This will give us possession of the Huzarat Junge and Barracks and will command their outer line of Entrenchments to the Kaisir Bagh. It will however give us some trouble to take these.

The Mutiny day by day.

It is quite astonishing the works and entrenchments these fellows have erected, every house, garden and street is a fortification, and if they had any pluck we should never be able to take them. As yet they have shewn none, but have bolted as soon as attacked. It will however be a long business as we shall be obliged to take every position one after another.

Outram was to have taken a more advanced position also this morning. I have not yet heard what his success has been.

I find I have been a good deal shaken by my fall, very sore all over, my left hand still a good deal swollen and useless. The pain in it has however subsided.

What a sad business the Loss of the Ava! Those unfortunate ladies from Lucknow what they have suffered!

NOTE.—The event of the day was the capture of the Begam's Kothi and the adjacent buildings, an exploit accomplished mainly by the 93rd Highlanders and the 4th Punjab Rifles. The rebel losses were far heavier than those stated by Wilson, but the casualties among the British Officers were serious, Wilson having to regret the loss of the valiant Hodson and the wound which incapacitated his faithful lieutenant of Delhi days, Alexander Taylor. The news of this important success reached headquarters during the reception of Maharaja Jang Bahadur, who had at last arrived with the Nepalese Army. The victorious troops pressed on to the outworks of the Kaisarbagh, which constituted the last rebel stronghold, and further to the right occupied the Kadam Rasul and the Shah Najaf, after the capture of the Sikandar Bagh.

Meanwhile Outram had advanced all along the line and had secured the approaches to the two bridges. The Iron Bridge was held, but the Stone Bridge proved too exposed, and the troops fell back on a mosque, thereafter maintaining from these positions a heavy fire on the Kaisarbagh.

This letter contains some further startling instances of originality in spelling. The map affords a clue to the intention.

CLXX.

Hd. Qr. Camp.

12th. March, 1858

Our progress yesterday was very satisfactory. Outram's force cleared all the Suburbs on the other side the Goomtee, killing some 500 of the Rebels, and taking two Guns. He is

now established an easy mortar range from the Kaisir Bagh, and I am sending him over more Howitzers and Mortars to pound it. On our side we stormed and captured the Begum's Palace, killing upwards of 200 of the Rebels. It was splendidly done. The Highlanders, Wilde's Punjaubees and Ghoorkhas all rushed in together, and took it with very small loss. We have however lost some good officers, Moorsom, Thynn and Cooper of the Rifles, killed. Sanford 3rd L. C. Two officers 93rd also killed. Taylor, Engrs, flesh wound, Hodson dangerously through the liver. He had no business to be there, but should have been 5 miles off with his Horse. A few others I believe slightly wounded. Jung Bahadur joined us yesterday morning with 11 or 12000 men, who look as if they would do good service. I have not seen John for some days, he is on the other side of the River with Outram's Force.

My bruises and aches are doing as well as could be expected.

* * * * *

I have had letters from Calcutta of the 5th, why should not yours come?

NOTE.—The day was chiefly occupied with the consolidation of the positions won. After their hard fighting the 2nd (Lugard's) Division was relieved by the 4th Division under General Franka, and the Nepalese troops were brought up into the line on the left, covering the canal westwards from Banks' Kotli.

The officers mentioned were Captain W. F. Thynne and Haig L. R. Cooper of the 2nd Battalion, Rifle Brigade, Lieutenant W. R. Moorsom, 52nd Light Infantry, D. A. Q. M. G., 1st Infantry Division, Captain C. A. Sanford of the 3rd Light Cavalry, as well as Captain C. W. McDonald and Lieutenant C. W. Seigison of the 93rd Highlanders. The first four were killed in the fighting on the East of the Gumbi.

After securing the approaches to the bridges, Outram had proceeded towards the Fyzabad road, there joining hands with Hope Grant, who was on the extreme right. Swinging round towards the river, the force encountered a large body of rebels, including the 15th Irregular Cavalry, who found their retreat cut off and fled eastwards, only to be pursued and entirely destroyed by the cavalry.

The Mutiny day by day.

It is quite astonishing the works and entrenchments these fellows have erected, every house, garden and street is a fortification, and if they had any pluck we should never be able to take them. As yet they have shewn none, but have bolted as soon as attacked. It will however be a long business as we shall be obliged to take every position one after another.

Outram was to have taken a more advanced position also this morning. I have not yet heard what his success has been.

I find I have been a good deal shaken by my fall, very sore all over, my left hand still a good deal swollen and useless. The pain in it has however subsided.

What a sad business the Loss of the Ava! Those unfortunate ladies from Lucknow what they have suffered!

NOTE.—The event of the day was the capture of the Begam's Kothia and the adjacent buildings, an exploit accomplished mainly by the 93rd Highlanders and the 4th Punjab Rifles. The rebel losses were far heavier than those stated by Wilson, but the casualties among the British Officers were serious, Wilson having to regret the loss of the valiant Hodson and a wound which incapacitated his faithful lieutenant of Delhi days, Alexander Taylor. The news of this important success reached headquarters during the reception of Maharaja Jang Bahadur, who had at last arrived with the Nepalese Army. The victorious troops pressed on to the outworks of Kaisarbagh, which constituted the last rebel stronghold, and further to the right occupied the Kadam Rasul and the Shah Najaf, after the capture of the Sikandar Bagh.

Meanwhile Outram had advanced all along the line and had secured the approaches to the two bridges. The Iron Bridge was held, but the Stone Bridge proved too exposed, and the troops fell back on a mosque, thereafter maintaining from these positions a heavy fire on the Kaisarbagh.

This letter contains some further startling instances of originality of spelling. The map affords a clue to the intention.

CLXX.

Hd. Qr. Camp.

12th. March, 18.

Our progress yesterday was very satisfactory. Outram's force cleared all the Suburbs on the other side the Goomti, killing some 500 of the Rebels, and taking two Guns. He

[illegible]

ork was
s on the
ing was
ans and
bagh.
ery, and

858.

pos-
good
heart-
tem.
anner
uses,
ing
een
the
and
he
as
k

The Mutiny day by day.

CLXXI.

*Hd. Qr. Camp, Martiniere,
13th. March, 1858.*

'This morning I had the pleasure of receiving your two dear letters of the 5th and 6th. I hope you are getting mine. I have written regularly. What can have come over James Abbott? Does he expect the Calcutta Baboos and young Bengal to rise in arms? and take Calcutta? Or are the disarmed Sepoys to do it with their fists?

I am very sorry to hear Gen. Dupuis is so sure at what he calls Sir Colin's insults to the R. A., I do not think that any of his Officers here will back him. I am happy to say the two services get on uncommonly well together. The utmost harmony prevails between them. The only contention between them being who shall work hardest and show their zeal best before the enemy. They are a very fine set of fellows, and only want a little Indian experience to be perfect. You may mention this opinion of mine whenever you hear the subject broached.

'This day's news is not much. Last night we worked through the Block of Buildings up to the Road between them and the Imaum Bara. I expect to-day we shall take possession of the latter, when we shall have turned their second line of entrenchments and be only 400 yards from the Kaisir Bagh. The Ghurkhas are working forward into the City on our left. I have not heard what Outram did yesterday. I shall be very glad when it is over, for it gets very hot in the day time and I cannot stand it as I did last year. Poor Hodson died of his wound yesterday afternoon.

NOTE.—Hodson died at Banks' Kothi in the afternoon of the 12th and was buried that evening in the garden behind the Martiniere. Sir Colin Campbell and a large concourse attended the funeral, the whole army lamenting the loss of this gallant young officer who, for all the criticism levied against his action after the capture of Delhi, was regarded with universal admiration and esteem.

The Mutiny day by day.

200

Nothing spectacular occurred on the 13th, but a great deal of work was done by the Engineers, who were steadily sapping through the buildings on the left up to the Little Imambara near Hazratganj. The building by the evening was breached, and the assault was fixed for the following day.

On the other side of the river Wilson's new batteries of heavy guns and mortars had been constantly engaged in pounding the city and the Kaisarbagh.

Colonel James Abbott commanded the 7th Battalion Bengal Artillery, and subsequently commanded the Regiment.

CLXXII.

Hd. Qr. Camp Martiniere.

14th. March, 1858.

About 2 hours ago I sent you a Tel: Message to say we had possession of the Kaisir Bagh. I hope you have received this good news. It has been easy work. The Pandies evidently lost heart when they found we went across the river and outflanked them. We took the Imaum Barah this morning which was no sooner done, than our fellows rushed forward into the advanced houses, and from them into the Kaisir Bagh itself. There was nothing for it but to support them, and so the place was taken whether we would or no. Outram is attacking them on the Residency side, and as we have all their entrenchments and most of their Guns, I expect there will not be a Pandey in the City by tomorrow morning. They will all have bolted. As soon as this is the case I shall ask for my Rooksut and I think you may secure our Passage for 9th April, if you possibly can.

NOTE.—The telegram as received by Lady Wilson has been preserved, and runs as follows:—

From Camp, from Major Gen: Wilson to Calcutta, to Lady Wilson, 5 Camac Street. 4 p. m. 14th March.

• We are in possession of the Kaser Bagh.

It is clear from this letter that the idea of surrounding the rebel army and fighting to a finish had been abandoned. Wilson explains the view taken by General Headquarters in his next letter; a view which was perhaps reasonable, but nevertheless proved false by the subsequent turn of events. The immediate object was to drive the rebels out of Lucknow, under the impression that this defeat would end the rebellion. With this present in their minds, it is

The Mutiny day by day.

easy to comprehend the dismay occasioned by Lord Canning's proclamation. It is possible that the Governor General expected the result anticipated at first by Sir Colin Campbell, that is, the destruction of the organized forces of the enemy.

As Wilson states, events had moved rapidly. The 10th Foot and Brayer's Sikhs stormed the breach in the Little Imambara, and then pushed on to the adjoining houses, thus gaining command of the Eastern end of the third line of works immediately defending the Kaisarbagh. Colonel Harness, Commanding Royal Engineers, at this point desired to stay the advance, according to plan; but the Sikhs, guided by Havelock, and supported by the 10th, pushed on and occupied the Chini Bazar. Here they repelled a determined counter-attack and as matters had reached this unexpected stage, Sir Colin Campbell brought up reinforcements all along the line, and in a short time the whole of the second line had been gained as well as a large extent of ground beyond, including the Mess House, the Tara Kothi, the Moti Mahal and the Chutter Manzil. Meanwhile Brayer had become heavily involved in the courtyard of the Kaisarbagh, and the fierce resistance he encountered in every building of the palace caused heavy casualties. The buildings were not cleared by night-fall, and confusion was caused by an orgy of looting and destruction. Reinforcements arrived at length, with the result that the Kaisarbagh was secured; but the completeness of the victory was marred by the unaccountable order of the Commander-in-Chief, who had prevented Outram from crossing the river and thus taking the main force of the enemy in rear. It is clear that restraining order had been given before the amazing advance effected this day had been realised; but none the less it proved disastrous and in the words of Lord Roberts "a grand opportunity was lost" and the siege operations themselves were unnecessarily protracted.

CLXXIII.

Hd. Qr. Camp. Martiniere.

15th. March, 1858.

Hurrah! The Siege operations are all over here, and I have Sir Colin's permission to resign my Command and take myself off to you. In three or four days I hope to leave this, and after reaching Cawnpore, I shall lose no time in hastening down to you. Secure a good roomy Cabin if possible in the 9th April Steamer, don't mind what you pay for it. I should prefer so I think would you, proceeding via Marseilles. The sooner I can get home the better, I am sadly in want of rest. You had better take our Passage only to Alexandria. The Rebels have bolted, I believe in the direction of Secapore.

A Column (preceded by Cavalry) moves after them tomorrow, but I suspect they will all disperse; every one will be against them. They have received a very severe lesson here, which they will not forget in a hurry. I received your's of the 9th to-day. Lots to do.

NOTE.—This letter shows the extent of the miscalculations of the Commander-in-Chief. Had Hodson lived, his talent for obtaining information would have been invaluable. Actually the day was wasted owing to faulty intelligence. Hope Grant was sent with his cavalry in pursuit of the flying rebels in the direction of Sitapur, while Brigadier Campbell departed on a similar mission from the Alambagh towards Sandila. Both efforts were idle, for the rebels had not fled, and on the 17th both columns were recalled. Worse than this, the Fyzabad road had been left open, with the ultimate result that more than 20,000 of the enemy escaped unmolested and the war in Oudh was indefinitely prolonged. In Lucknow itself no advance was made beyond the line running from the Kaisarbagh to the Chutter Manzil, the continuous opposition displayed along this line being such that the failure to appreciate the situation was the more remarkable.

On the 16th Outram at last crossed the Gumti by an extemporised bridge opposite the Sikandra Bagh. Passing the Mess House he reached the Kaisarbagh and thence attacked the historical Residency, storming that position in half an hour. After strenuous fighting the Machhi Bhawan and the great Imambara were captured, a number of guns being taken. The rebels attempted to escape by the Stone Bridge, but were checked by Walpole and repulsed with heavy loss. It is possible that this effort was merely in the nature of a feint, for a mass of the rebels took a detour northwards and crossed the river higher up, thus making the Fyzabad road and a clear line of retreat, beyond reach of Hope Grant and his cavalry, by this time far to the north.

The position on the 16th was that the rebels still held the whole of the city, westwards of a line running from the Imambara to the Residency and the Kaisarbagh, thence southwards to the Char Bagh, behind which was the Nepalese force. West of this they occupied their entrenched line confronting the Alambagh position; and from this line they delivered their last attack on the reduced garrison at that post. This assault was of a determined nature and lasted for four hours, an infantry demonstration being supported by a flank attack of cavalry and guns. Vincent Eyre, who was in command, detached O'pheits to deal with the menace on the flank, while he himself maintained a heavy fire on the massed infantry in front. These measures had the desired result, but in consequence of the danger to the line of communications it was found necessary to extend the Nepalese position westwards along the canal and so take the long line of enemy trenches in rear.

The Mutiny day by day.

CLXXIV.

*Hd. Qr. Camp, Martinere.**17th. March, 1858.*

I fear I must give you a little disappointment: I shall not be able to get away tomorrow. I thought everything was over, but it appears there were a lot of the Rebels left in the City, who either could not or would not go out, and yesterday we were obliged to pound them again. They showed little or no fight, and we took possession of the Residency-Muchee Baun and the old Imaunbara, and we kept up a Bombardment upon the City all last night. The fellows have been streaming out all night and all morning. There may be few desperate men still remaining but Sir Colin will not send his men into the streets to drive them out. I am however of no further use here now, and I hope to get away on the 19th. My Investiture I believe is to take place this afternoon. As soon as I learn for certain when I may go, I will write to Gen. Inglis to lay my Dawk.

Vincent Eyre has been over to see me to-day, and he has agreed to come down to Calcutta with me. I do so long to get away and join you again. I received yours of the 10th this morning. I suppose you will hardly write again after receiving my Telegraph Message. The Investiture takes place at 5 p. m.

I did not write yesterday.

NOTE.—On the morning of the 17th Outram advanced his line, seizing Husainabad and the Daulat Khana. Later in the day further progress was made, but the densely populated area of the city was left untouched. The furthest point held was the Jami Masjid, where a terrible explosion of powder resulted in some 40 casualties.

To the south Maharaja Jung Bahadur had been actively employed. Crossing the canal by the Char Bagh bridge, he pushed on towards the Residency, taking position after position. He was exposed to a heavy counter-attack, but this was repulsed with complete success, the enemy losing ten guns.

Meanwhile Sir Colin Campbell had learned that the last remaining mass of the enemy was concentrated in the Musa Bagh, to the north-west of the city. He determined to benefit by this last chance of striking a decisive blow, and he felt that success would break the neck of the rebellion. It was with this in view that he considered it possible to break up the army of Lucknow. In the event, however, the design miscarried. Outram attacked the position on the 19th with complete success, but the Cavalry brigade under Brigadier Campbell of the Bays was misdirected and reached its destination from the Alambagh too late to undertake anything more than a desultory pursuit of the rebels scattered in small parties over miles of country.

Campbell has been greatly blamed for this disappointing conclusion to operations which had otherwise, save in one particular, been conducted with astonishing judgment and success. He was new to India and completely ignorant of the locality; but even so, had it been otherwise, the accurate direction and timing of this long flank march through the closest possible country, interspersed with dense groves and broken by ravines involved a difficult task which might well have proved fruitless in more experienced hands. The march was conducted by night, and when day broke the force was involved in a series of skirmishes with bands of desperate rebels, which, if of little importance, were fully sufficient to divert the brigade from its immediate and unseen objective.

CLXXV.

*Hd. Qr. Camp, Martiniere,
18th. March, 1858.*

This is the last letter I shall send you. I leave this to-morrow morning, have written to have my Dawk laid from Cawnpore on the 21st, from Allahabad on the 23rd, and hope to reach you by the night train on the 26th. I shall hope to find you established at Spence's. I should prefer that to Miss Wrights's or any boarding house. Have somebody at the Terminus with a note to say where I shall find you. I received your's of the 12th. to-day, but will defer all reply until I have my arm again round you. I hope you have secured a good roomy Cabin for 9th. April.

NOTE.—The plans laid were carried out to the letter, and Wilson left India at the appointed date. He was not yet 55 years old, but he returned to England greatly aged and shaken. Before the Mutiny he had remained remarkably young and active, as is clear from the accompanying portrait, the reproduction of a watercolour painting by Sir William Richmond, R. A., taken when on leave less than five years before the outbreak.

APPENDIX II.

Despatches Relating to

THE

Siege and Capture of Lucknow.

GENERAL ORDERS

BY

HIS EXCELLENCY THE COMMANDER IN CHIEF,

Adjutant General's Office, Calcutta, 30th March 1858.

THE FOLLOWING GENERAL ORDER ISSUED TO THE FORCES
IN THE FIELD IS PUBLISHED TO THE ARMY.

Headquarters, Camp, Lucknow, 22nd March 1858.

The Commander-in-Chief congratulates the Army on the reduction and fall of Lucknow.

From the 2nd till the 21st March, when the last body of rebels was expelled from the town, the exertions of all ranks have been without intermission; and every regiment employed has won much distinction.

The attacks on both sides of the river Goomtee, ably conducted by the Generals and Commanding Officers of brigades and regiments, have been sustained by the men with vigor and perseverance; the consequence being, that great results have been achieved with comparatively moderate loss.

His Excellency returns his warmest thanks to the Troops.

Every man who was engaged, either in the old Garrison of Lucknow, in the relieving Forces, or at the Siege which has now terminated, may rest satisfied that he has done his duty, and deserves well of his Country.

By order of His Excellency the Commander-in-Chief,

W. MAYHEW, *Lieut.-Colonel,*

Adjutant General of the Army.

The Mutiny day by day.**EXTRAORDINARY.***Allahabad, the 5th April, 1858.*

No. 54 of 1858. The Right Hon'ble the Governor-General having now received the Despatches from his Excellency the Commander-in-Chief, giving an account of the re-taking of Lucknow by the Force under His Excellency's personal Command, is pleased to publish them for general information:—

In December last, it became the grateful duty of the Governor General in Council to promulgate in General Orders the announcement of the relief of the Garrison of Lucknow, so admirable achieved by General Sir Colin Campbell, G.C.B. and the rescue of the Women and Children, sick and wounded, long beleaguered there. It is now the Governor-General's privilege to convey to His Excellency the tribute of his highest admiration, and of his most cordial congratulations on the capture of the strong City of the Rebels.

From the 2nd till the 16th of March, a series of masterly operations took place, by which the Commander-in-Chief, nobly supported in his well-laid plans of attack by the ability and skill of the General Officers, and by the indomitable bravery and resolution of the Officers and Men of all Arms, drove the Rebels successively from all their strongly fortified posts, till the whole fell into the possession of our Troops.

That this great success should have been accomplished at so little cost of valuable lives, enhances the honour due to the Leader who has achieved it.

It is a pleasure to the Governor General to acknowledge publicly the services of the General and other Officers who took part in the capture of Lucknow.

During the last days of the operations, the Nepalese Force, under Maha Rajah Jung Bahadoor, was associated with the Army under General Sir Colin Campbell's Command.

To the distinguished Leader of that Force, the Maha Rajah Jung Bahadoor, the Governor General desires to express his thanks for the hearty co-operation which the Commander-in-Chief received from His Highness, and for the gallant bearing of His Highness' Troops.

To Major-General Sir James Outram, G.C. B., the Government of India is under a new debt of gratitude. After having held the exposed post of Alum Bagh for more than three months, in the face of powerful bodies of Rebels, whose attacks he never failed to repel, Sir James Outram has further greatly distinguished himself at the head of the 1st Division, by the brilliant and thoroughly complete manner in which he executed the duties entrusted to him. The Governor-General requests that Sir James Outram will accept his most sincere thanks.

His Lordship offers his hearty acknowledgments to the other General Officers, whose services are prominently noticed in these Despatches:

To Major-General Mansfield, Chief of the Staff, of whose eminent services the Commander-in-Chief speaks with well merited commendation.

To Major-General Sir Archdale Wilson, Baronet, K.C.B., in chief Command of the Artillery who, after winning lasting renown in the capture of Delhi, has borne a conspicuous part in the reduction of Lucknow.

To Major-General Sir J. Hope Grant, K. C. B., Commanding the Cavalry of the Force; to Brigadier-General Walpole, and Brigadier-General Lugard, K. C. B. Commanding the 2nd, 3rd, and 4th Divisions of Infantry.

The Governor General has to record his acknowledgments to Captain Sir William Peel, K. C. B. Commanding the Naval Brigade of Her Majesty's Ship *Shannon*, and to offer his especial thanks to him for his remarkable services.

The Mutiny day by day.

The Governor General entirely concurs with His Excellency the Commander-in-Chief, in prominently recognising the great skill and ability of Brigadier Napier, who Commanded the Engineers of Her Majesty's and the East India Company's Services forming part of the Force. Brigadier Napier is especially entitled to the thanks of the Governor-General, and to him, to Colonel Harness, Commanding the Royal Engineers, and to the several Officers under them, of both the services, His Lordship's grateful acknowledgments are offered.

The Governor General has much satisfaction in expressing his high sense of the merits of the several Officers Commanding Brigades and Regiments.

To the Commanding Officers of the Royal Artillery, of the Naval Artillery, and of the Bengal and Madras Artillery, the Governor General tenders his cordial thanks.

To Major Norman, Deputy Adjutant General of the Army, to whose superior merits and distinguished services the Commander-in-Chief bears willing testimony, a tribute in which the Governor-General concurs; to Colonel the Hon'ble W. L. Pakenham, C. B., Officiating Adjutant General, Her Majesty's Forces in India, to Lieutenant Macpherson, Officiating Quartermaster General of the Army; to Captain Seymour, Officiating Quarter Master General Her Majesty's Forces; to Captain Bruce, Deputy Quarter Master General, and Captain Algood, Assistant Quarter Master General, to Lieutenant-Colonel Keith Young, Judge Advocate General; to Captain Fitzgerald, Assistant Commissary General, who is especially mentioned by the Commander-in-Chief, to Lieutenant P. Stewart, of Engineers, Superintendent of Electric Telegraphs; to Dr. MacAndrew, Inspector General of Hospitals, Her Majesty's Forces, and to Doctor Brown, Superintending Surgeon of the Force, the Governor General has much satisfaction in expressing his sense of the good service they have rendered.

To the Officers of the Personal Staff of the Commander-in-Chief, of the Chief of the Staff and of General Officers Commanding Divisions the thanks of the Governor General are due; and his Lordship records his acknowledgements to the Officers of the Staff, of Divisions and Brigades, all of whom have zealously performed their duty.

To the officers, and men of every service, Soldiers, Seamen and Marines, composing the Force by which Lucknow has been taken, the Governor General desires to express his admiration of their conduct, and to tender to each individual the thanks of the Government of India. His Lordship will take the earliest opportunity of bringing under the favorable notice of Her Majesty's Government, and of the Hon'ble the Court of Directors, the services rendered by the Force.

In testimony of the services, the Governor General is pleased to direct that every officer and Soldier, European and Native, and the Officers and Men of the Navy who took part in the capture of Lucknow, shall receive a donation of six months' batta.

By order of the Right Hon'ble the Governor General.

R. J. H. BIRCH, *Colonel,*

*Secretary to the Govt. of India, Mily Dept.,
with the Governor General.*

THE RIGHT HON'BLE

THE VISCOUNT CANNING.

*Governor General of India,
etc., etc. etc.*

*Camp, La Martiniere,
Lucknow, 22nd March, 1858.*

MY LORD,

I have the honor to announce to your Lordship, that I transferred my Head Quarters to the Camp of Brigadier-General Sir Edward Lugard, K. C. B., at Buntara, on the 28th

The Mutiny day by day.

ultimo, the Division which had been detached under Brigadier-General Sir J Hope Grant, K. C. B., and that under Brigadier-General Walpole joining the next day.

Having received tolerably correct information with respect to the lines of works which had been constructed by the Enemy for the defence of Lucknow, it appeared evident to me that the necessity would arise for operating from both sides of the Goomtee, when the capture of the City should be seriously entertained.

Two very important reasons conduced to show the expediency of such a course—the one being that it would become possible to enfilade many of the Enemy's new works, the other that great avenues of supply would be closed against the Town, although I could not hope to invest a City having a circumference of twenty miles.

My first preparations, therefore, were made for the purpose of crossing the River. Bridges of Casks had been previously constructed, and were ready in the Engineer's Park.

DETAILS.

Head Quarters of the Division of Artillery, and of the Field Artillery Brigade, under Major General Sir A. Wilson, K.C.B., and Colonel D. Wood, C. B., R. H. A. Lieut-Col. D'Aguilar's Troop, R. H. A.

Lt.-Col. Towns.	} Troops Bengal C. B., and Lt. Bishops	} Horse Artillery under Lt. Col. Turner.

Two 24-Pounders and two 8-inch Howitzers of the *Shan-nou's* Naval Brigade, 2 Cos Punjab Sappers and Miners.

The Head Quarters of the Cavalry Division and the 1st Cavalry Brigade, under Brigadier General Sir J. H. Grant, K. C. B., and Brigadier Little, H. M. 9th Lancers.

On the 2nd March, I advanced on Dilkhoosha with Troops as per margin, and seized that position after a skirmish in which a gun was taken from the Enemy.

When the Brigades of Infantry began to close on the Advance Guard, the Enemy opened several Guns which were in positions in strong Bastions, along the line of the Canal. This fire was heavy and well sustained.

These Guns commanded the Plateau, and compelled me to retire the Camp as far back as it was possible, but not so far as I could have wished, owing to the Ravines in rear.

2nd Punjab Irregular Cavalry.
Detachment 5th Punjab do,
do.

1st Sikh Irregular Cavalry.

The 2nd Division of Infantry,
under Brigadier-General Sir
R. Lugard, K.C.B., consisting of
3rd Brigade, { H. M.'s 34th Regt.
Brigdr. P. { do. 38th do.
M.M. Guy. { do. 53rd do.
4th Brigade, { 42nd Highland-
Brig. Hon { ers. 93rd ditto.
A. Hope { 4th Punjab Rifles

The Palace of Dilkoosha was occupied as an Advance Picquet on the right, and the Mahomed Bagh on the left,—heavy Guns being placed in battery at both points to keep down the hostile fire.

During the whole of the 2nd, until these arrangements could be completed, the Troops were much annoyed by the Enemy's Guns.

After that day, until an advance took place, although the shot ranged up to and sometimes into the Camp, but slight loss ensued from this cause.

On the 3rd and 4th, the remainder of the Siege Train, together with Brigadier-General Walpole's Division, closed up on the Dilkhoosha position, the Right of our line resting on Bibiapore and the Goomtee, the left being towards Alum Bagh.

There was an interval of about two miles between our left and Jellalabad, the right of the Alum Bagh position. This Interval was occupied by a Regiment of Irregular Horse. Brigadier Campbell, with a strong Brigade of Cavalry and Horse Artillery, secured the extreme left, and swept the Country towards the North-West.

Three Infantry Regiments were withdrawn from Alum Bagh, and joined the Head Quarters Camp.

On the 5th, General Franks, of the 4th Division of Infantry, came into direct communication with me. This Officer had marched right across the Kingdom of Oude, having signally defeated many bodies of Insurgents, and kept his time with punctuality according to the orders given to him, with which your Lordship is already acquainted.

On the same day the Goomtee was bridged near Bibiapore. Whilst the Bridge was being formed, the Enemy showed on the left bank, causing the necessity of a disposition of Troops and heavy Guns. He did not, however, make a real attack.

The Mutiny day by day.

These Guns were very useful in another respect, as their practice on the Martiniere silenced much fire, which would otherwise have annoyed the Picquets.

They were accordingly kept on the same ground for some days, till the advance of the Troops rendered them unnecessary.

On the 6th, Sir James Outram, G. C. B. who had been

Force sent across the Goomtee under Sir J. Outram.

DETAIL.

Lt. Col. D' Aguilar's Troop
R. H. A.

Major Remington's and
Captain McKinnon's Troops,
Bengal H. A. under Lieut-
Colonel P. Turner.

Captains Gibbon and Middle-
ton's Light Field Batteries,
Royal Artillery and Head
quarters, Field Artillery
Brigade.

Head quarters Cavalry Divi-
sion and of 1st Cavalry Bri-
gade.

H. M.'s 2nd D. G. [Bays].

H. M.'s 9th Lancers.

2nd Punjaub Cavalry Detach-
ments 1st and 5th Punjaub
Cavalry, under Capt's. Watson
and Sanford.

3rd Infantry Division under
Brig. General R. Walpole.

5th Brigade,	{ H. M.'s 23rd
	{ Fusiliers.
Brigadier	{ H. M.'s 79th
	{ Highlanders,
Douglas, C.B.	{ 1st Bengal
	{ Fusiliers.

6th Brigade,	{ 2nd Battn. Ri-
	{ fle Brigade. 3rd
Brigadier	{ Bn. do. 2nd
Horsford, C.B.	{ Punjaub Infy.

with drawn from Alum Bagh, crossed to the left bank of the Goomtee with Troops as per margin, the 4th Division under Brigadier General Franks, C. B. taking the place vacated by Brigadier General Walpole in the line.

The plan of attack which had been conceived, was now developed, and Sir J. Outram was directed to push his advance up the left Bank of the Goomtee, while the Troops in the position of Dilkhoosha, remained at rest till it should have become apparent that the first line of the Enemy's works, or the rampart running along the Canal and abutting on the Goomtee, had been turned.

The works may be briefly described as follows:—

The series of Courts and Buildings called the Kaiser Bagh, considered as a Citadel by the Rebels, was shut in by three lines of defence towards the Goomtee, of which the line of the Canal was the outer one.

The second line circled round the large building called the Mess-House and the Moti Mahul, and the first or interior one was the principal rampart of the Kaiser Bagh.

The rear of the enclosures of the latter being closed in by the City, through which approach would have been dangerous to an assailant.

These lines were flanked by numerous bastions, and rested at one end on the Goomtee, and at the other on the great

buildings of the Street called the Huzrut Gunge, all of which were strongly fortified, and flanked the Street in every direction.

Extraordinary care had been expended on the defences of the houses and bastions, to enfilade the Street. His duty was ably performed by Sir James Outram, who pitched his Camp on the 6th Instant, after a skirmish of his Advance Guard, in front of the Chukkur Walla Kotee, or Yellow House.

On the 7th he was attacked by the Enemy, who was speedily driven back.

Having reconnoitered the ground on the 8th Instant, I directed Sir James Outram to arrange his Batteries during the succeeding night, and to attack the enemy's position, the key of which was the Chukkur Walla Kotee, the next day or the 9th.

This was done in very good style by the the Troops under his Command, the Enemy being driven at all points, the Yellow House being seized, and the whole Force advanced for some distance through ground affording excellent cover for the Enemy.

He was then able to bring his Right Shoulders forward, occupying the Fyzabad Road, and to plant his Batteries for the purpose of enfilading the works on the Canal before alluded to.

He lost no time doing this, other Batteries of heavy Guns and Howitzers being constructed during the following night to play on the works and the Kaiser Bagh.

While this attack was being made by Sir James Outram, along the left bank of the Goomtee on the 9th Instant, a very heavy fire was kept up on the Martiniere both from Mortars and heavy Guns, placed in position during the previous night on the Dilkhoosha Plateau.

At 2 P. M., the 42nd Highlanders, supported by the 93rd Highlanders, the 53rd and 90th Regiments, stormed

The Mutiny day by day.

the Martiniere under the direction of Brigadier-General Sir Edward Lugard, K. C. B., and Brigadier the Hon'ble Adrian Hope.

It was quickly seen that the enfilading fire on the line of the Canal from the opposite side of the River had produced the expected result.

The 4th Punjaub Infantry, supported by the 42nd Highlanders, climbed up the entrenchment abutting on the Goomtee, and proceeded to sweep down the whole line of the works till they got to the neighbourhood of Banks' House, when it became necessary to close operations for the night.

Major Wylde, 4th Punjaub Rifles, distinguished himself very much on this occasion. The line of works was strongly occupied by the Troops which had first entered, and by the 53rd Regiment.

On the 10th instant, Sir James Outram was engaged in strengthening his position. Sir James Hope Grant, K. C. B., being employed in patrolling towards the Cantonment with the Cavalry placed under Sir James Outram's orders, a system of extensive patrolling or reconnaissance having been established by my order in that direction from the time that the first position had been taken up across the Goomtee.

At sunrise on the same day, a disposition of Troops and Heavy Guns was made by Sir Edward Lugard for the attack of Banks' house, which was carried at noon and secured as a strong Military post.

The second part of the plan of attack against the Kaiser Bagh now came into operation, viz; to use the great blocks of House and Palaces, extending from Banks' house to the Kaiser Bagh, as our approach, instead of sapping up towards the front of the second line of works.

By these means I was enabled to turn the new works towards our own left, at the same time that they were enfiladed on the Right by Sir James Outram's advance.

The latter had already received orders to plant his guns with a View to raking the Enemy's position, to annoy the Kaiser Bagh both with vertical and direct fire, also to attack the suburbs in the vicinity of the Iron and Stone-Bridges, shortly after day-break, and so Command the Iron, Bridge from the left bank.

All this was carried out by Sir James Outram with the most marked success.

The Enemy, however, still held tenaciously to his own end of the Iron-Bridge on the Right bank, and there was heavy cannonading from both sides, till the Bridge was afterwards taken in reverse.

Sir Edward Lugard's attack on the 11th was pressed forward in like manner.

The operation had now become one of Engineering character, and the most earnest endeavours were made to save the Infantry from being hazarded before due preparation had been made.

The Chief Engineer, Brigadier Napier, placed the Batteries with a view to breaching and shelling a large block of Palaces called the Begum Kotee.

The latter was stormed with great gallantry by the 93rd Highlanders, supported by the 4th Punjaub Rifles, and one thousand Goorkhas, led by Brigadier the Honorable Adrian Hope, under the direction of Brigadier General Sir Edward Lugard, at 4 P. M.

The Troops secured the whole block of buildings, and inflicted a very heavy loss on the Enemy, the attack having been one of very desperate character.

This was the sternest struggle which occurred during the Siege.

From thence forward the Chief Engineer pushed his approach with the greatest judgment through the enclosures, by the aid of the Sappers and of heavy Guns, the Troops immediately occupying the ground as he advanced, and the

The Mutiny day by day.

Mortars being moved from one position to another as ground was won on which they could be placed.

The buildings to the right, and the Secunder-Bagh were taken in the early morning of the same day without opposition.

During the night of the 12th, Sir James Outram was reinforced with a number of heavy Guns and Mortars, and directed to increase his fire on the Kaiser Bagh, while at the same time, Mortars placed in position at the Begum's house never ceased to play on the Emambara, the next large Palace it was necessary to storm between the Begum Kotee and the Kaiser Bagh.

On Brigadier-General Franks, C.B., who had relieved Sir Edward Lugard, and the 2nd Division, with the 4th Division, on the 12th Instant, devolved the duty of attacking the Emambara.

A Column of Attack was formed for that purpose by Brigadier D. Russell, on the morning of the 14th.

In the mean time, the Maha Rajah Jung Bahadoor, with a Force of about (9,000) Nine Thousand Men, and with 24 Field Guns drawn by Men, had arrived and taken his position in our line on the 12th Instant, and moved close to the Canal on the 13th.

At my request, His Highness was begged by Brigadier General MacGregor, C.B., the Special Commissioner attached to him, to pass the Canal and attach the suburb in his front and considerably to the left of Banks' house. To this His Highness acceded with much willingness, and his Force was most advantageously employed in thus covering my Left for several days, during which, from the nature of our operations, I was obliged to mass all the available strength of the British Force towards the Right, in the joint attack carried along both banks of the Goomtee.

The Emambara was carried early on the 14th, and the Seikhs of the Ferozepore Regiment under Major Brasyer, pressing forward in pursuit, entered the Kaiser Bagh, the third

line of the Defences having been turned without a single Gun being fired from them.

Supports were quickly thrown in, and all the well-known ground of former defence and attack, the Mess-house, the Tara Kotee, the Motee Mehal, and the Chuttar Munzil were rapidly occupied by the Troops, while the Engineers devoted their attention to securing the position towards the South and West. The day was one of long and continued exertion, and every one felt that although much remained to be done before the final expulsion of the Rebels, the most difficult part of the undertaking had been overcome.

This is not the place for description of the various buildings successively sapped into or stormed; suffice it to say, that they formed a range of massive palaces and walled courts of vast extent, equalled perhaps, but certainly not surpassed in any capital in Europe. Every outlet had been covered by a work, and on every side were prepared barricades and loopholed parapets.

The extraordinary industry evinced by the enemy in this respect has been really unexampled. Hence the absolute necessity for holding the Troops in hand, till at each successive move forward the Engineers reported to me that all which could be effected by Artillery and the Sappers had been done before the Troops were led to the assault.

The 15th instant was employed in securing what had been taken, removing powder, destroying mines and fixing mortars for the further bombardment of the position still held by the Enemy on the line of our Advance up the Goomtee and in the heart of the City.

Brigadier-General Sir J. Hope Grant, K. C. B., was sent on with Cavalry on one side towards Seetapore to intercept fugitives, while Brigadier Campbell marched with like orders in the direction of Sundeela on a similar duty. They returned on the 17th to their former positions.

The Mutiny day by day.

On the 16th instant, Sir James Outram with the 5th Brigade under Brigadier Douglas, supported by two other Regiments, H. M.'s 20th and the Regiment of Ferozepore, having crossed over the Goomtee by a Bridge of Casks opposite the Secunder Bagh, advanced according to order through the Chuttur Manzil to take the Residency.

During the first movement of this operation, a movement of the Enemy in retreat across the Stone-Bridge became apparent.

Sir James was ordered to press forward, and he was able, almost without opposition, not only to take the Iron-Bridge in reverse, which was my principal object, but also to advance for more than a mile and occupy the Muchee Bawun and great Emambara.

In short the City was ours.

Brigadier-General Walpole's Picquets on the left bank were attacked by the retreating Enemy who was, as usual, heavily repulsed.

On the 19th a combined movement was organized.

Sir James Outram moved forward direct'y on the Moosa Bagh, the last position of the Enemy on the line of the Goomtee.

Sir J. Hope Grant cannonaded the latter from the left Bank, while Brigadier Campbell, moving right round the Western side from the Alum Bagh, prevented retreat in that direction.

The route was now complete, and great loss was inflicted on the Enemy by all these Columns.

On the 16th for the last time, the Enemy had shown in some strength before Alum Bagh, which on that date was held by only two of our Regiments.

Jung Bahadoor was requested to move to his left up the Canal, and take the position in reverse from which our position at Alum Bagh had been so long annoyed.

This was executed very well by His Highness and he seized the positions, one after another, with little loss to himself.

The Guns of the Enemy, which the latter did not stop to take away, fell into his hands.

On the 21st, Sir Edward Lugard was directed to attack a stronghold held by the Moulvie in the heart of the City. This he occupied after a sharp contest, and it now became possible to invite the return of the inhabitants and to rescue the City from the horrors of this prolonged contest.

Brigadier Campbell, with his Cavalry attacked, the Enemy when retreating from the City in consequence of Sir Edward Lugard's advance, inflicting heavy loss, and pursued him for six miles.

I beg to enclose Sir James Outram's own account of his operations, which were removed from my immediate superintendence till he re-crossed the Goomtee prior to the attack of the 16th.

It was matter of real gratification to me to be able to entrust the Trans-Goomtee operation to this very distinguished Officer, and after that had been conducted to my perfect satisfaction, to bring him forward again to put the finishing stroke on the Enemy, while the extended position in the Town was of necessity held by the Troops who had won it. My thanks are eminently due to him, and I trust he will receive them as heartily as they are offered.

I have now the pleasing task of communicating to your Lordship, the name of an Officer to whom, not only I as Commanding General, but to whom in truth, the service at large is under great obligation. Major General Mansfield, the Chief of the Staff, whose labour has been unceasing, whose abilities are of the highest order, and have been of the greatest use to me during this campaign. It is impossible for me to praise this Officer too highly, or to recommend him sufficiently to the protection of your Lordship and of the Government.

The Mutiny day by day.

I desire to draw the particular attention of your Lordship to Brigadier-Generals Franks, C. B., Walpole, Sir J. Hope Grant, K. C. B., and Sir Edward Lugard, K. C. B.

Their Divisions have been most admirably Commanded, and they have on every occasion amply justified all my expectations.

Brigadier-Generals Walpole and Sir J. Hope Grant, were employed more immediately under the direction of Sir James Outram, who speaks in the highest terms of the assistance he received from them.

Sir J. H. Grant's management of his Cavalry and Horse Artillery is always most admirable.

As detailed above, the manner in which the attacks on the main line of operations were directed by Sir Edward Lugard and Brigadier General Franks reflected the greatest credit on them.

The Officers in Command of the Cavalry Brigades have proved themselves equal to their high position, and are worthy of your Lordship's favourable consideration.

Brigadier Campbell, in Command of the Cavalry on the left, performed his detached duty with much vigilance and judgment. His march round the City on the 19th Instant, which was a running fight for the greater part of the day, was a very difficult one.

His pursuit, on the 21st, of the party which broke away after being driven by Sir Edward Lugard from Shadut Gunge, was highly effective.

Brigadier Hagart has received the marked commendation of Sir J. Hope Grant, and the Brigadiers in Command of In-

The Mutiny day by day.

222

fantry Brigade, have particularly distinguished themselves under the eyes of their Divisional Commanders:—

Brigadier D. Russell,...	... 1st Brigade.
„ P. M. M. Guy,	... 3rd „
„ Hon'ble A. Hope,	... 4th „
„ Douglas, C. B.,	... 5th „
„ Horsford, C. B.,	... 6th „
„ Eveleigh, ...	... 7th „

and Lieutenant-Colonel Longden (Her Majesty's 10th Foot) attached to the Goorkha Brigade, by order of the Commander-in-Chief.

The Head Quarters 2nd Brigade, with the 5th Fusiliers, and 78th Highlanders under Brigadier Franklin, remained at Alum Bagh in position and was well disposed by that Officer to resist the Enemy's demonstration on the 16th Instant.

To Major-General Sir Archdale Wilson, K. C. B., my warmest acknowledgments are due for the effective manner in which he Commanded the Artillery Division.

The four Corps, the Naval Brigade, the Royal Artillery, the Bengal Artillery and the Madras Artillery, worked with the greatest harmony under his happy direction as one Regiment.

The merits of Sir Archdale Wilson are too widely known to gain anything by encomium from me; but I may be permitted to express my great satisfaction at having been able to avail myself of the assistance of this most distinguished officer. The effective fire of the Artillery during the long operations which depended so much on the management of that arm elicited general admiration.

The practice of the 68-Pounders of the Naval Brigade was capital, while the Kaiser Bagh and other great Buildings which had been stormed, showed in a very convincing manner how truly the shells had been directed by the Royal and Bengal Artillery.

The Mutiny day by day.

Whenever the Field Artillery could be used the Troops of Horse Artillery and Field Batteries of Royal Artillery, the Bengal Artillery and the Madras Artillery did the most excellent service.

Sir Archdale Wilson expresses his great obligations to Captain Sir William Peel, K.C.B., Royal Navy, till that most gallant Officer was severely wounded, and to Brigadiers Wood, C. B., Royal Horse Artillery, and Barker, C. B., Royal Artillery, respectively Commanding the Field and Siege Artillery Brigades.

It would be difficult for me to give an adequate idea of the zeal and activity displayed by the Chief Engineer, Brigadier Napier, Bengal Engineers. Many of the operations depended on his proper appreciation of the obstructions to be overcome, and the means at his disposal for that purpose.

His great professional skill and thorough acquaintance with the value of his Enemy have been of the greatest service and I recommend him most cordially to your Lordship's protection.

I am under very great obligations to him.

The Officer's of the general Departments of the Army have accompanied me during the Siege and I beg to return them my thanks. They are as follows:—

Major H.W. Norman, Deputy Adjutant General of the Army.

Lieutenant-Colonel W. Macpherson, Officiating Quartermaster General of the Army.

Colonel Hon'ble W. L. Packenham, C. B., Officiating Adjutant General Her Majesty's Forces.

Captain C. F. Seymour, 84th Regiment, Officiating Quartermaster General H. M.'s Forces.

Captain G. Algood, Officiating Assistant Quartermaster General of the Army.

Lieutenant-Colonel Keith Young, Judge Advocate General of the Army.

Lieutenant P. Stewart, Bengal Engineers, Superintendent of Electric Telegraphs.

Doctor MacAndrew, Inspector General of Hospitals, H. M.'s Forces.

Doctor Brown, the Superintending Surgeon of the Force, has again won my sincere thanks for his admirable arrangements.

Captain Fitzgerald, Assistant Commissary General, who has had the disposition of the Commissariat in the Field, has met every want of the Army. He has distinguished himself much, and is a credit to his Department.

I must draw very particular attention to the services of Major Norman, Deputy Adjutant General, who besides his ordinary Departmental duties, has performed the very onerous one of Adjutant General of the Army in the Field throughout the Campaign.

To Captain H. Bruce, Deputy Quartermaster General, Head of the Intelligence Department, and to Captain G. Algood, Officiating Assistant Quartermaster General, who performed the duties of Quartermaster General of the Army in the Field, until the arrival of Lieutenant-Colonel Macpherson. These Officers have all been most active in the performance of their duties.

To my Personal Staff and that of Major General Mansfield, my acknowledgements are due, but more particularly to my Military Secretary, Colonel Sterling, C. B., and to Captain R. G. Hope Johnstone, Bombay Army, Deputy Assistant Adjutant General to the Chief of the Staff. These two Officers are most indefatigable.

A List of the other Members of these Staffs is appended.

The Mutiny day by day.

Finally, I wish to draw your Lordships attention to the conduct of the Regimental Officers, Commissioned and Non-Commissioned, and to the Men of the Regiments.

Their conduct has been very brilliant throughout. The manner in which the 93rd Regiment flung itself into the Begum Kotee, followed by the 4th Seikhs and supported by the 42nd, was magnificent, and the subsequent attack on the Emambara and the Kaiser Bagh reflected the greatest credit on the Regimental Leaders of the 4th Division, and the Soldiers who followed them.

Corrected Lists will be sent immediately of the Officers and Soldiers who are deemed most worthy of distinction in a Force in which every one has a claim.

I have the honor to be.

MY LORD,

With the greatest respect,

Your Lordship's most obedient and humble servant,

C. CAMPBELL, *General,*

Commander-in-Chief in India.

To

THE RIGHT HON'BLE THE VISCOUNT CANNING,

Governor General,

&c., &c., &c.

Camp Lucknow, 28th March 1858.

MY LORD,

I have the honor to report to your Lordship the departure of His Highness Jung Bahadoor from the Camp before Lucknow.

I desire to take this opportunity to express my thanks to His Highness for the assistance rendered to me during the late operations by him and his gallant troops.

I found the utmost willingness on his part to accede to any desire of mine during the progress of the Siege, and from

the first His Highness was pleased to justify his words that he was happy to be serving under my Command.

His troops have proved themselves worthy of their Commanders, and it will doubtless be a happiness to them hereafter that they were associated with the British Arms for the reduction of the great City of Lucknow.

My best thanks are due to the Special Commissioner, Brigadier General MacGregor, C. B., the medium of communication between His Highness and myself.

I beg to recommend him and the British Officers Serving under his orders to the favorable consideration of your Lordship.

I have the honor to be,
My Lord,
With the greatest respect,
Your Lordship's most obedient
and humble servant,
C. CAMPBELL, *General,*
Commander-in-Chief.

*Memorandum of Operations carried on under the Command of
Major General Sir James Outram, G. C. B., during the
Siege of Lucknow.*

On the morning of the 6th Instant shortly before daybreak, I proceeded with the Force named in the margin, to cross the Goomtee River, over the two temporary Bridges

4th Co. Royal Engineers
and 254 Bengal Sappers, Lt.
Col. D'Aguilar's Troop Horse
Artillery, Capt. Mackinnon's
Troop and Capt. Remington's
Troop of Bengal Artillery.

2nd Dragoon Guards, 9th
Lancers, a Detacht. of 1st
Punjab Cavalry, 2nd Punjab
Cavy., a Detacht 5th Punjab
Cavalry.

23rd R. W. Fus.	} 5th Btl.
79th Highlandrs.	
1st Bengal Fus.	
2nd Bn. Rl. Bd.	} 6th Btl.
3rd Bn. Rl. Bgd.	
2nd Punjab Infy.	

which had been constructed by the order of His Excellency, the whole of the Cavalry being under the Command of Brigadier-General Sir James Hope Grant, K. C. B., the Infantry under that of Brigadier Walpole, the Field Artillery under Brigadier D. Wood, C. B., the Siege Artillery, which subsequently joined me, under Lieutenant-Colonel Riddell, R. A. After proceeding a short distance in a Northerly direction, the Enemy

The Mutiny day by day.

became visible on our left flank, and on being approached by the cavalry they were discovered to be in considerable force, chiefly Sowars. The 2nd Puujaub Cavalry then attacked on the Right, while Major Smith, of the Queen's Bays, with two Squadrons of his own Regiment, one Squadron of the 9th Lancers, and Lieutenant-Colonel D'Aguilar's Troop of Horse Artillery, advanced from our left. The Enemy were immediately driven back, and pursued to the banks of the River, many being cut up; but I regret to state that in this charge the gallant Major Smith was killed. Our Camp was then formed on the Fyzabad Road, about half a mile in advance of the village of Chinhat, on the Lucknow side. Early on the following morning, 7th March, the Enemy made a smart attack on our advanced picquets, and brought out several Guns under cover of ravines and clumps of trees in our front. They were, however, speedily withdrawn, on our Skirmishers and Horse Artillery and Captain Middleton's Field Battery, protected by the Cavalry, coming to the front and opening their fire. The Artillery* practice on this occasion, as on the preceding day, was admirable.

3. The following day, the 8th Instant, under the instructions of His Excellency, Colonel D'Aguilar's Troops of Horse Artillery and the 9th Lancers re-crossed the River to the Head Quarters Camp, and the Siege Guns named in the margin joined me.

24-Pr. Guns	..	8	Having decided upon an attack on the Enemy's position, on the next morning, the 9th Instant, I caused an entrenchment for 8 24-Pounder Guns and three 8-inch Howitzers to be constructed during the
8-inch Howitzers	..	4	
8-inch Mortars	..	10	
	..	22	
		—	

night. The Battery was armed, and commenced its fire at day-break with excellent effect, after which the Right Column of Infantry, accompanied by Captain Gibbon's Field Battery, under Brigadier General Walpole, covered with a cloud of

*I.t.- Col. D'Aguilar's C. B., R. A., Capt. Remington's, B. A., and Capt. Mackinnon's Troop.

Skirmishers Commanded by Brigadier Horsford, C. B., supported by the 5th Brigade under Brigadier Douglas, drove the Enemy through the jungles, walls, and villages which afforded them an excellent cover, and bringing the right shoulders forward, occupied by the Fyzabad Road. In the mean time, the left Column of Attack, composed of the 1st Bengal Fusiliers, supported by 2 Companies of the 79th Highlanders, which had been held in readiness on the left of the Battery, together with the Horse Artillery under Brigadier Wood, which had been formed in rear of the Bridge across the Kokral advanced, and in concert with the Right Column, carried the Chukr Kothee (or Yellow-house,) the key of the Rebel position, in gallant style, and thereby turned the strong line of entrenchment, which had been constructed by the Enemy on the right bank of the Goomtee, of which success the Skirmishers on the other side of the River, subsequently, were apprised by Lieutenant Butler, of the Bengal Fusiliers, who swam across the Goomtee, and climbing the parapet, remained in that position for a considerable time under heavy fire of Musketry, until the work was occupied. After the occupation of the Chukr Kothee, we drove the Enemy rapidly through the old Irregular Cavalry lines and suburbs to the Padshah Bagh. The fortified gates of this strong-walled enclosure were blown open, and the garden occupied, and two Guns found by our Troops. Three Guns and a Howitzer were then placed in position to enfilade the works in rear of the Martiniere. A Battery of two 24-Pounder Guns and two 8-inch Howitzers was placed near the River to keep down the fire from the Town. A Battery for five Mortars was constructed during the night, and in the morning commenced playing on the Kaiser Bagh. Four heavy Guns were also placed in a work thrown up by the Enemy at the East entrance into the Padshah Bagh.

4. On the 10th, we were occupied in strengthening our position, the Enemy being in force in the suburbs in our front, from which they made an attack in considerable numbers on

The Mutiny day by day.

a picquet held by the 79th Highlanders, but were repulsed with heavy loss. General Sir James Hope Grant occupied himself the while in patrolling the vicinity, during which operation a most valuable Young Officer, Major Sandford, of the 5th Punjaub Irregular Cavalry, was unfortunately killed; but the Enemy suffered severely.

5. During this night, another Battery was constructed in the Padshah Bagh for four 24-Powders, two 8-inch Howitzers and five 8-inch Mortars, which kept up a vertical and direct fire on the defences in the interior of the Kaiser Bagh. Two more 24-pounders were also brought to bear on the Mess-House and on the Kaiser Bagh, in compliance with the instructions of His Excellency. I made arrangements to attack the suburbs in the vicinity of the Iron and Stone-Bridges, and shortly after day light on the 11th instant, the Right Column

79th Highlanders.	as per margin formed on the Fyza-
2nd and 3rd Battalion Rifle	bad Road under the immediate Com-
Brigade.	mand of Brigadier General Walpole,
1st Bengal Fusiliers.	and worked its way covered by its
Captain Gibbon's Lt. Fd.	
By., and two 24-Pounders.	

Skirmishers, through the Town, until it reached the mosque on the old Cantonment road, which commands the approach to the Iron Bridge.

6. The Left Column as per margin proceeded along the

Two 24-Pr. Guns.	lower road, towards the Iron-bridge.
Three Field Battery Guns,	These two Columns were connected
Royal Artillery.	by a strong chain of Skirmishers,
23d R. W. Fusiliers.	which, as well as the Left Column,
2nd Punjab Infantry under	met with considerable opposition,
Comd. of Lt.-Col. Pratt.	

as the Enemy opened 3 Guns on them from the opposite side of the River, and also held the ground in great strength in front of the rifle Skirmishers Commanded by Brevet Major Warren, Captains Wilmot and Thynne and Lieutenant Grey, who all behaved most gallantly. Captain Thynne, a most promising officer, I regret to say, was mortally wounded. This column occupied the houses down to the river's bank, and

the head of the Iron-bridge, to the right of which the two 24-Pounder Guns were placed in Battery. The spirit and dash of the men during this critical operation was most remarkable, and merits my highest commendation. Lieutenant Moorsom, Deputy Assistant Quarter Master General, who had been deputed by me to guide the column, was killed on the spot while reconnoitring on the opposite side of the road. I deplore sincerely the loss of this most gallant and promising young Officer, whose soldier-like zeal and acquirements rendered him an ornament to his profession.

7. Having left the Bengal Fusiliers posted in the Mosque on the Cantonment Road, I proceeded with the remainder of the Right Column in that direction, and shortly afterwards met Sir J. H. Grant's Cavalry and Horse Artillery, which in the mean time had been operating on the extreme right. Turning now towards the Stone-Bridge, we surprised the Camp of the Rebel 15th Irregular Horse, whose standards and 2 Guns were captured by the Rifles, the Enemy flying in all directions over the plain, many being cut up by our Cavalry.

8. I then penetrated to the head of the Stone-Bridge, through the strong and dense suburbs, without encountering any material opposition. The Enemy, however, were able to command it with Guns, as well as with Musketry, from the tops of several high and strong Stone-Houses, from the opposite side of the River, and the position was moreover too distant, and the approaches too intricate, to warrant my holding it permanently with the Force at my disposal. I therefore withdrew to the Mosque at the cross road, already occupied by the Bengal Fusiliers, our route being through suburbs in which we destroyed a quantity of munitions of war, and finally we retired to Camp, when the arrangements for the occupation of the Iron Bridge had been completed.

9. During the nights of the 12th, and 13th, having been reinforced by four 18-Pounder Guns, two 10-inch Howitzers,

The Mutiny day by day.

five 10-inch Mortars and four 5½-inch Mortars, three Batteries were erected from which five 10-inch Mortars, ten 8-inch Mortars, four 24-Pounder Guns, were brought to bear upon the Kaiser Bagh, on the fall of which on the morning of the 14th, the Guns and Mortars were turned on the Residency and the buildings to the right of the Bridge. During this operation Lieutenant Cuthbert, of the Royal Artillery, brought himself prominently to notice by extinguishing a fire in a small building in front of his Battery, in a very dangerous and exposed position. The operations connected with a breast-work across the Iron Bridge, were conducted by Lieutenant Wynne, R. E., and Sergeant Paul, who displayed great coolness and resolution in the face of a heavy and continual fire.

Having been ordered to join His Excellency's Camp, my operations on the North side of the Goomtee were here brought to a close.

Our casualties during these proceedings amounted to five Officers killed and nine wounded, and the loss in men including Sergeants, was twenty-one killed one hundred and four wounded. Total twenty-six killed and one hundred and thirteen wounded. With the exception of the Officers, the above statement of casualties does not include the Cavalry Division, General Sir J. H. Grant having been ordered off into the district, neither his casualty list, nor his notice of his Officers has been received. From the peculiar nature of the fighting, the actual loss of the Enemy is difficult to ascertain. But I cannot estimate it at less than two thousand throughout the whole operations.

On the 16th instant, under instructions from His Excellency, I proceeded to the Kaiser Bagh, where I found the Brigade under the Command of Brigadier Douglas, C. B., comprising the 23rd Fusiliers, the 79th Highlanders, and the 1st Bengal Fusiliers, to which His Excellency had added Her Majesty's 20th Regiment and the Ferozepore Regiment of Sikhs.

The Mutiny day by day.

Vast numbers of the Enemy having been seen crossing the Stone Bridge from the City, apparently with the design of attacking Brigadier General Walpole's Camp, on the North of the Goomtee, His Excellency ordered me to press our movement. I immediately ordered the advance, and took possession of the Residency with little opposition, the 23rd Fusiliers charging through the gateway, and driving the Enemy before them at the point of the bayonet, the remainder of the Brigade following them in reserve.

The Enemy having been dislodged from the Residency, two Companies of the 23rd, under Lieutenant-Colonel Bell, accompanied by Captain Gould Weston, who pointed out the road, pressed rapidly forward, and captured the brass Gun, which was in position to sweep the Iron Bridge, after some opposition. In the meanwhile the Residency height was crowned by a Field Battery of Madras Artillery, under the Command of Major Cotter, which kept up a heavy fire on the Muchhee Bhowun. This Battery was subsequently withdrawn, and replaced by two 68-Pounder Guns of the Naval Brigade. On their arrival, the Bengal Fusiliers moved to the Iron Bridge, and shortly afterwards advanced, together with the Regiment of Ferozepore, and took the Muchhee Bhowun and the Imambarah, the Enemy precipitately retiring, and abandoning six Guns. One Company of the Fusiliers under Captain Salisbury was pushed on to the Roomidurwaza gate, where another Gun was captured. The 79th were then brought up to occupy the Imambarah, and the remainder of the Bengal Fusiliers were placed in the Muchhee Bhowun.

On the morning of the 17th, Brigadier Douglas caused the Hozeinabad Mosque and the Dowlutkhana, in which two Guns and a small Mortar were found, to be occupied by a Company of the 79th Highlanders. About 1 p. m.,

Captain Middleton's
Field Battery.
Two 8-inch Howitzers

} with the Force named in the margin,
I moved towards the block of buildings known as Shurfooddowlah's

The Mutiny day by day.

1 Co. Native Sappers.
 1 Wing H. M's 20th Foot.
 1 do. " 23rd "
 1 do. " 79th "
 Brasyer's Seikhs.

house, having previously occupied the entrance to the Chowk with 3 Companies of the 79th Highlanders.

On arriving at the Juma Musjit, nine cart loads of powder were found in a court-yard in the rear, which impeded our progress. I therefore ordered it to be destroyed under the supervision of the Engineers. I regret, however, to state that from some accidental cause the powder ignited.

Captain Clarke, R.E., and Lieutenant Brownlow, B.E., who had greatly distinguished themselves, have since died from the effects of the explosion, in whose melancholy death the Service has sustained a heavy loss, which I sincerely deplore. About thirty men shared their fate, and the rest of the working party were more or less injured.

I then sent two Companies of the 79th Highlanders with one 8-inch Howitzer, to take possession of Shurfoodowlah's house, which was occupied without any casualty, the Enemy precipitately retreating, although they had made every preparation for a vigorous defence. An Iron Gun and a Brass Gun with an Ammunition Waggon, together with several small Guns, all in position, were captured.

I then reinforced the three Companies of the 79th in the Chowk, with five Companies of the 20th Regiment, and completed the chain of communication.

On the 18th, Brigadier Douglas ordered Lieutenant Gordon, Commanding a picquet of the 20th, to clear the houses in his front, which he effected much to the Brigadier's satisfaction, killing twenty-three of the Enemy.

The Stone-Bridge was found to be undermined and the circumstance reported to His Excellency.

On the morning of the 19th, under instructions from His Excellency, I proceeded to attack the Moosa Bagh, the force named in the margin being assembled for that purpose.

2 Squadrons 9th Lancers.
 1 Company R. E.
 1 do. Native Sappers
 1 Field Battery, Captain Middleton's.

At about $\frac{1}{2}$ past 6 A.M. I proceeded to Gao Ghat, and

2-18-Pounders. } Under
2-8 in. Howzrs. } Capt. Car-
4-8 in. Mort. } leton, B.A.
3 Cos. 20th Regiment.
7 .. 23rd do.
79th Highlanders.
2nd Punjaub Infantry.

found Ali Nuki Khan's House occupied by the Enemy, who opened a sharp fire of Musketry on the head of the Column. Two companies of the 79th, led by Lieutenant Evereth, being ordered to advance, soon drove

the Enemy out, and took possession of it. Considerable delay here took place in consequence of having to break through a thick wall, during which time I ordered up a Wing of the Bengal Fusiliers to occupy the house.

The Troops then advanced through the suburbs without opposition towards Moosa Bagh, which position the Enemy was reported to occupy with thirteen Guns, and five or six thousand men.

On arriving on the open ground two Guns were opened on the Column and the Enemy appeared in great strength on the road. I immediately ordered out Skirmishers from the 79th and 23rd and Captain Middleton's Battery to the front, whose fire soon silenced that of the Enemy, during which time the Lancers made a flank movement to the Enemy's Left, and on our advance, their whole Force took to flight, abandoning their Guns; on finding which I sent to order back the heavy Guns under escort of the three Companies of the 20th Regiment as being no longer required.

The two Squadrons of the 9th Lancers followed up the pursuit for about four miles, when they overtook the Enemy, captured six Guns and killed about a hundred of them, the rest dispersing over the country, and escaping by the aid of the Nullahs and broken feature of the Country. The conduct of the officers and Men of the 9th, was most gallant, as they undauntedly charged masses of the Enemy.

The Field Artillery and Infantry followed in support as rapidly as possible, and captured four more Guns, making in all twelve, which I believe to be the total possessed by the

The Mutiny day by day.

Enemy, no trace of the reported thirteenth Gun being observable.

I then occupied the Moosa Bagh with the 2nd Punjaub Infantry under Major Green, and withdrew the rest of the Troops to their quarters in the City.

Throughout the course of these operations, which were very laborious, the cheerfulness and zeal of both Officers and Men were most conspicuous, and merit my warmest thanks.

I have to express my particular acknowledgements to Brigadier-General Walpole, who afforded me on every occasion the most cordial support, and very ably carried out the operations which fell to his share; also to Brigadier-General Sir James Hope Grant, Commanding the Cavalry, whose vigilance and activity in the execution of his onerous duties were unceasing.

Brigadier Wood, C. B., Commanding the Field Batteries, and Lieutenant-Colonel Riddell, Commanding the Siege Train, carried on their respective duties to my entire satisfaction. The services of Lieutenant-Colonel Turner, B. A., specially attached to the Force, were of the greatest value to me, and I beg to tender him my cordial acknowledgement for the same.

It is a source of much gratification to me to submit the names of those officers engaged in the operations on the North bank of the Goomtee, who have been honourably mentioned by Brigadier-General Walpole and their respective Commanders, *viz.* Brigadiers Horsford, C.B., and Douglas, Commanding 5th and 6th Brigades, Lieut-Colonel Hill, Commanding 2nd Battalion Rifle Brigade, Lieut-Colonel Macdonald, C. B., Commanding 3rd Battalion Rifle Brigade, Captain Gibbon, R. A., who commanded the 9-pounder Field Battery.

The Brigadier-General also particularly notices the conduct of Captain Barwell, Deputy Assistant Adjutant General, and Captain Carey, Deputy Assistant Quartermaster General;

also that of Captain Warner, A. D. C., and Lieutenant Eccles, his Orderly Officer.

The Brigadiers wish to record the services of their respective Staffs:—Captain Macpherson, 78th Highlanders, (wounded,) Brigade Major of the 5th Brigade, Brevet Major Mollau, Brigade Major 6th Brigade, and Brevet Major Ross, and Lieut. Walker, their Orderly Officers.

Brigadier Wood, C. B., favourably mentions the conduct and professional knowledge of Lieutenant-Colonel Turner, Lieutenant-Colonel D'Aguilar, Major Yates, Brevet-Major Pennycuick, Captain Gibbon, Captain Mackinnon, Captain Remington, and Captain Johnston; he also notices the assistance he received from Captain Frith, his Brigade-Major, and Captain Scott, in charge of the Commissariat arrangements.

Lieutenant-Colonel Riddle, Commanding Siege Train, eulogizes Captains Thring, Goodenough and Walker, R. A., Captain Pearson and Lieutenant Simeon, B. A., and Lieutenants Cutlibert and FitzMaurice, R. A., and Major Turner and Captain Young, Staff Officers.

Major Nicholson, R. E., highly applauds the energy displayed by the Officers of that Department, *viz.* Lieutenants Malcolm, Wynne, Swetenham and Keith, R. E. and Lieutenants Watson, Tennant, Hovenden, and Nuthall, B. E.

Lieutenant-Colonel Wells records the services of Major Bruce, Captains Prevost, Duff and Norton, of the 23rd Fusiliers.

I have next to notice the services of the Officers engaged on the South of City side of the River.

Brigadier Napier, Captain Hutchinson, Brigade Major, and Lieutenant Greathed, of the Engineers, afforded me on different occasions the greatest assistance by their professional advice, and I tender them my cordial thanks; they were ably seconded by Lieutenant Tulloch and Mr. May, attached to that Department.

The Mutiny day by day.

Major Brasyer led his Seikhs with his usual gallantry, and I regret to add, was severely wounded.

My thanks are also due to Captain Bennett, Commanding Her Majesty's 20th Regiment.

Captain Coles, in Command of two Squadrons of the 9th Lancers, did good service in pursuing the Enemy when they had abandoned their position in the Moosa Bagh. On this occasion the local knowledge of Captain Carey, Deputy Assistant Quartermaster General of the 3rd Division, was of much use to me. Captain Dodgson, Assistant Adjutant General, Captain Gordon, Deputy Judge Advocate General, and Ensign Hewitt, 41st Regiment N. I., orderly officer, were present at the occupation of the Moosa Bagh, having joined me from Alum Bagh, where they had been of much service in their respective appointments.

I have lastly to bring to His Excellency's consideration the services of those officers who had the good fortune to be engaged in all the operations on both sides of the River.

Brigadier Douglas has carried out all his instructions with signal ability and success, and deserves my cordial acknowledgements, as does Major Nicholson, R. E., who evinced the most indefatigable industry in the construction of the heavy Batteries which it fell to his Department to execute, and in choosing sites for which he was constantly exposed to very heavy fire.

Lieutenant-Colonel Wells Commanded the 23rd Fusiliers until incapacitated by illness (on the last day's operation) when the Command was assumed by Lieutenant-Colonel Pratt, who also Commanded the Left Column of attack on the 11th Instant, across the river. Lieutenant-Colonel Taylor was in command of the 79th Highlanders, Major Green, Punjaub Rifles, and Captain Cunliffe, Commanded the 1st Bengal Fusiliers, until the arrival of Captain Hume, who also deserves my thanks. Captain Middleton Commanded the Field Battery, which was actively engaged throughout.

Brigadier Douglas mentions with approbation, Captain Stevenson, Acting Brigade Major, and Lieutenants Walker, 79th, and Utteton, 23rd Fusiliers, his A. D. C. and Orderly Officer.

I have the highest pleasure in acknowledging how much I am indebted to the Officers of my Personal Staff.

His Excellency is already aware of the opinion I have formed of the merits and services of Colonel Berkely, H. M.'s 32nd Regiment, my Military Secretary; and the assistance I have derived from him, throughout these operations, is an additional obligation I am under to this most deserving officer.

Captain Chamier, A. D. C., and Lieutenant Hargood, A.D.C., (Horse killed) have worked with the unremitting zeal and activity which has characterized their conduct in all the operations in which I have been engaged since I left Allahabad in September last.

Captain Weston, 65th Regiment N. I., Orderly Officer, has signalized himself by the spirit and gallantry which he has displayed on several occasions, and has been of much use to me.

Captains Orr and Bunbury, of the Intelligence Department, have performed their duties with great ability, and Mr. Denison, C. S., who recently brought up Despatches from the Governor General, accompanied the Forces, and was most active and zealous in rendering aid to the poor sufferers who were blown up in the explosion on the 17th Instant.

Mr. Kavanagh, Assistant Commissioner, from his knowledge of the localities, rendered good service on several occasions.

J. OUTRAM, *Major-General,*
Comdg, the 1st Divn. of the Army.

The Mutiny day by day.

No. 1123 of 1858.—The Honble the President of the Council of India in Council, has much satisfaction in now publishing the following letter from Major General Sir J. Outram, G.C.B. bringing to notice certain omissions in his previous despatches.—

No. 367-A.

FROM

THE DEPY. ADJUT. GENL. OF THE ARMY.

TO

THE SECRETARY TO THE GOVT. OF INDIA.

Military Department,

With the Governor General.

Head Quarters Camp, Fultehgurh.

The 31st May 1858.

SIR,

By desire of the Commander-in-Chief I have the honor to forward, in original, two letters from the Honorable Major General Sir J. Outram, G. C. B., bringing to notice certain omissions in his previous Despatches.

I have the honor, &c.,

H. W. NORMAN, *Major,*

Depy. Adjt. Genl. of the Army.

FROM

MAJOR GENERAL OUTRAM,

Late Commanding 1st Division.

TO

MAJOR NORMAN,

Deputy Adjt. Genl. of the Army.

Calcutta, 24th May 1858.

SIR,

I have the honor to request that you will do me the favor to bring to the notice of His Excellency the Commander-in-Chief certain unintentional omissions of which I find I have

been guilty in my despatches—omissions which I know have hurt the feelings, and which I fear may have proved injurious to the interests, of meritorious Officers.

When on the 25th November, I detailed for His Excellency's information the proceedings of the Oude Field Force during the two preceding months, I ought to have stated that, in consequence of the indisposition of Major Galwey, Captain Raikes had for some time commanded the 1st Madras Fusiliers, and that he had entitled himself to my hearty thanks for the able and zealous manner in which he acquitted himself of his duties, and the omission is the more to be regretted, as Captain Raikes' temporary accession to the Command of his Regiment alone prevented his conducting the operations, for the admirable performance of which his junior, Captain Grant, has received his Brevet Majority. The fact that two of his juniors have been promoted for special services, coupled with the omission of his name in my despatches, is calculated to mislead those who were not present at Lucknow, into the belief that Captain Raikes had not merited my approbation. The very reverse of this is the case.

To Major Galwey and the Madras Fusiliers, it is due to rectify a still more important omission in my dispatch detailing the operations which His Excellency did me the honor to confide to my conduct during the siege and reduction of Lucknow in March last. During those operations the gallant Fusiliers, under their brave and able Commander, acquitted themselves with their wonted courage and discipline. A wing of the Regiment, under the personal Command of Major Galwey, formed part of the Column detailed for the storm of Sheriff-ood-Dowlah's mansion, and they it was that actually took possession of the house.

I would also beg to submit, for His Excellency's most favourable consideration, the merits and claims of Captains Bouverie, H. M.'s 78th Regiment, and Spurgin, 1st Madras

The Mutiny day by day.

No. 1123 of 1858.—The Honble the President of the Council of India in Council, has much satisfaction in now publishing the following letter from Major General Sir J. Outram, G.C.B. bringing to notice certain omissions in his previous despatches.—

NO. 367-A.

FROM

THE DEPY. ADJUT. GENL. OF THE ARMY.

TO

THE SECRETARY TO THE GOVT. OF INDIA.

Military Department,

With the Governor General.

Head Quarters Camp, Fullehghurh.

The 31st May 1858.

SIR,

By desire of the Commander-in-Chief I have the honor to forward, in original, two letters from the Honorable Major General Sir J. Outram, G. C. B., bringing to notice certain omissions in his previous Despatches.

I have the honor, &c.,

H. W. NORMAN, *Major,*

Depy. Adjt. Genl. of the Army.

FROM

MAJOR GENERAL OUTRAM,

Late Commanding 1st Division.

TO

MAJOR NORMAN,

Deputy Adjt. Genl. of the Army.

Calcutta, 24th May 1858.

SIR,

I have the honor to request that you will do me the favor to bring to the notice of His Excellency the Commander-in-Chief certain unintentional omissions of which I find I have

been guilty in my despatches—omissions which I know have hurt the feelings, and which I fear may have proved injurious to the interests, of meritorious Officers.

When on the 25th November, I detailed for His Excellency's information the proceedings of the Oude Field Force during the two preceding months, I ought to have stated that, in consequence of the indisposition of Major Galwey, Captain Raikes had for some time commanded the 1st Madras Fusiliers, and that he had entitled himself to my hearty thanks for the able and zealous manner in which he acquitted himself of his duties, and the omission is the more to be regretted, as Captain Raikes' temporary accession to the Command of his Regiment alone prevented his conducting the operations, for the admirable performance of which his junior, Captain Grant, has received his Brevet Majority. The fact that two of his juniors have been promoted for special services, coupled with the omission of his name in my despatches, is calculated to mislead those who were not present at Lucknow, into the belief that Captain Raikes had not merited my approbation. The very reverse of this is the case.

To Major Galwey and the Madras Fusiliers, it is due to rectify a still more important omission in my dispatch detailing the operations which His Excellency did me the honor to confide to my conduct during the siege and reduction of Lucknow in March last. During those operations the gallant Fusiliers, under their brave and able Commander, acquitted themselves with their wonted courage and discipline. A wing of the Regiment, under the personal Command of Major Galwey, formed part of the Column detailed for the storm of Sheriff-ood-Dowlah's mansion, and they it was that actually took possession of the house.

I would also beg to submit, for His Excellency's most favourable consideration, the merits and claims of Captains Bouverie, H. M.'s 78th Regiment, and Spurgin, 1st Madras

The Mutiny day by day.

Fusiliers, who, as Majors of Brigade, rendered valuable assistance to Sir Henry Havelock in our advance to Lucknow, and to myself during the time we were locked up in that city. Their subsequent valuable services while under my Command at Allumbagh have already been acknowledged in my dispatch. But the zeal, gallantry and intelligence with which they had previously served the State in the advance to, and during our stay at, Lucknow, I had left to be described by General Havelock, who I know intended to render full justice to those deserving Officers. There is reason to fear that the sickness which resulted in the death of that ever-to-be lamented Officer prevented the fulfilment of his purpose; and that they have in consequence suffered in professional advance. Under this belief I venture to hope that, in consideration of their having been under my Command during the latter period of the siege of Lucknow, I may be allowed to be the means of remedying an unintentional omission on the part of my deceased and honored friend.

I would also venture to solicit His Excellency's most favourable notice of the good services of Lieutenant Diroms, the Staff Officer attached to Colonel Turner, of the Horse Artillery, while serving with me across the Goomtee. Colonel Turner speaks in high terms of eulogy of Lieutenant Diroms' conduct on that occasion; and of his soldierly qualities I myself had reason to form a high opinion. The omission of Lieutenant Diroms' name in my last Lucknow Dispatch was purely accidental.

I have, &c.,

J. OUTRAM, *Major-General*,

Late Comdg. 1st Division in the Field.

The Mutiny day by day.

242

FROM

MAJOR-GENERAL J. OUTRAM,
*Late Comdg, 1st Division,
of the Army in the Field.*

TO

MAJOR NORMAN,
*Depy. Adjt. Genl. of the Army,
Head Quarters Bareilly.*

SIR,

On the 20th Instant, I had the honor to draw the attention of the Chief of the Staff, Demi-officially, to the accidental omission in my Lucknow Dispatches, of a service rendered me by a Wing of the 1st Madras Fusiliers, and I expressed my deep regret at having thus unintentionally done injustice to a Regiment which had, by its unvarying zeal, steadiness, and bravery, placed me under the deepest obligations. I regret to have now to record another omission, equally accidental, and equally unjust. I refer to Captain Gibbon's Battery, which was with me throughout the whole of the operations on the left bank of the Goomtee, and was, after the night of the 8th of March, the only Field Battery on that side. On the 9th it was actively engaged during the whole day, and rendered most valuable service. Exposed to very heavy fire, it contributed materially to the capture of the Badsha Bagh. And on the 11th its services were put in requisition with the Columns which secured the approaches to the Iron Bridge.

The Battery suffered considerably on this occasion, having had no less than 15 Casualties, its Casualties on the 9th having amounted to 5.

The omission of all allusion to Captain Gibbon's Battery has arisen from my having confounded him with Captain Middleton, whose Battery I find ceased to belong to my Force on the evening of the 8th March.

The Mutiny day by day.

I sincerely hope it not yet too late for His Excellency the Commander-in-Chief to permit a public rectification of a mistake which has very naturally hurt the feelings of a brave body of men, and is calculated to prove injurious to their Commander, and his subordinate Officers, whose services were witnessed by Sir J. Hope Grant as well as by myself, and are warmly eulogized by that distinguished Officer.

I have, &c.,

J. OUTRAM, *Major-General,*

Late Comdg. 1st Divn. of the Army in the Field.

No. 283 of 1858.—The Right Hon'ble the Governor-General is pleased to direct the publication of the following letter from the Adjutant-General of the Army, No. 478-A., dated 7th July 1858, bringing to notice the services of the Military Train, which were not prominently stated in the despatches published regarding Lucknow:—

No. 478-A.

FROM

THE ADJT. GENL. OF THE ARMY,

TO

THE SECY. TO THE GOVT. OF INDIA,

Military Department,

With the Governor General.

Head Quarters Allahabad,

The 7th July 1858.

SIR,

It having been brought to the notice of the Commander-in-Chief that the services of the 2nd Battalion Military Train, under Lieutenant-Colonel J. P. Robertson, have not been adequately acknowledged in the Despatches connected with the relief of Lucknow in November 1857, and the capture of that City in March last, His Excellency desires to rectify these omissions.

2. The Military Train joined the Force under the personal orders of the Commander-in-Chief, just prior to the relief of Lucknow; and with portions of Her Majesty's 9th Lancers and Punjaub Cavalry, under Brigadier A. Little, was usefully and actively employed at the Dilkhoosha, in protecting the stores, and covering the rear of the Troops engaged in the relief of the Residency, during which period the Cavalry were daily engaged with the Enemy.

3. At the capture of Lucknow, the Military Train again rendered good and gallant service, particularly on the occasion of an attack made on our Troops at Alum Bagh, on the 16th March, when a very large force of the Enemy's Horse was kept in check and repulsed, principally by the fire of Artillery, aided by the bold countenance shown by the Military Train.

4. His Excellency has pleasure in bearing witness to the efficient service rendered by the 2nd Battalion Military Train, and while recommending the corps to the favourable consideration of the Right Hon'ble the Governor General, trusts that his Lordship will order steps to be taken to rectify the omission of acknowledgments for the services of the Corps in the Despatches above adverted to.

I have the honour to be,

SIR,

Your most obedient Servant,

W. MAYHEW, *Lieut.-Colonel,*

Adjt. General of the Army.

GENERAL ORDERS.

BY

HIS EXCELLENCY THE COMMANDER-IN-CHIEF.

Adjutant General's Office, Calcutta, 20th May 1858.

The following General Order issued to the Forces in the field, is published in General Orders to the Army:

The Mutiny day by day.*Head Quarters, Camp, Bareilly, 11th May 1858.*

The Commander-in-Chief, has received the most gracious commands of Her Majesty the Queen to communicate to the Army the expression of the deep interest felt by the Queen in the exertions of the Troops, and the successful progress of the Campaign.

Sir Colin Campbell has delayed giving execution to the Royal command, until he was able to announce to the Army that the last great stronghold of rebellion had fallen before the persevering efforts of the Troops of Her Majesty and the Honourable East India Company.

It is impossible for the Commander-in-Chief to express adequately his sense of the honour done to him in having been chosen by the Queen to convey Her Majesty's most gracious acknowledgment to the Army, in the ranks of which he has passed his life.

The Commander-in-Chief ventures to quote the very words of the Queen:

"That so many gallant and brave and distinguished men, beginning with one whose name will ever be remembered with pride, Brigadier General Havelock, should have died and fallen, is a great grief to the Queen. To all European, as well as Native Troops, who have fought so nobly and so gallantly, and amongst whom the Queen is rejoiced to see the 93rd, the Queen wishes Sir Colin to convey the expression of her great admiration and gratitude."

By order of His Excellency the Commander-in-Chief,

W. MAYHEW, *Lieut.-Colonel,*

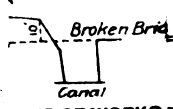
Adjutant General of the Army.

THE END.

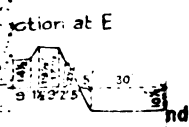
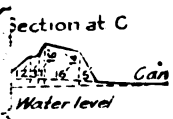
h May 1858
 most gramin
 cate to the
 y the Queen
 progress of
 ion to the
 o the Army
 before the
 y and the
 to express
 aving been
 gracious
 he has
 ry words
 ed men,
 embered
 ve died
 ropean,
 and so
 l to see
 ressession
 el,
 rmy.



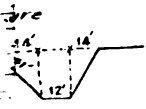
WORKS



LINE OF WORKS



WORKS



LINE OF WORKS

The Mutiny day by day.*Head Quarters, Camp, Bareilly, 11th May 1858.*

The Commander-in-Chief, has received the most gracious commands of Her Majesty the Queen to communicate to the Army the expression of the deep interest felt by the Queen in the exertions of the Troops, and the successful progress of the Campaign.

Sir Colin Campbell has delayed giving execution to the Royal command, until he was able to announce to the Army that the last great stronghold of rebellion had fallen before the persevering efforts of the Troops of Her Majesty and the Honourable East India Company.

It is impossible for the Commander-in-Chief to express adequately his sense of the honour done to him in having been chosen by the Queen to convey Her Majesty's most gracious acknowledgment to the Army, in the ranks of which he has passed his life.

The Commander-in-Chief ventures to quote the very words of the Queen:

"That so many gallant and brave and distinguished men, beginning with one whose name will ever be remembered with pride, Brigadier General Havelock, should have died and fallen, is a great grief to the Queen. To all European, as well as Native Troops, who have fought so nobly and so gallantly, and amongst whom the Queen is rejoiced to see the 93rd, the Queen wishes Sir Colin to convey the expression of her great admiration and gratitude."

By order of His Excellency the Commander-in-Chief,

W. MAYHEW, *Lieut.-Colonel,*

Adjutant General of the Army.

THE END.

av. brig. V. M.
s Co Art.

Artil. Par

da

Lahor

3rd line

Hussars

WORKS

Broken Br

Canal

LINE OF WORKS

Section at C

Can

Water level

Section at E

nd

WORKS

gre

14

12

2D LINE OF WO

WARDENS OF THE NORTH EASTERN MARCHES.

By Major A. Vickers 48th Pioneers.

Some years have now elapsed since the Yellow Peril turned the attention of strategists towards the North Eastern frontiers of India. The menace of war indigenous to the hot rocks and arid nullas of the North-West is the normal focus of political and strategical thought in this country. There are occasional North Eastern flashes in the political pan and among the last of these was Colonel Younghusband's Mission to Lhasa and, still later, a road-making exploit up the Lohit Valley in response to a rumour that the Yellow Peril was advancing towards Sadiya and the plains of Assam. Political "canards" of Imperial magnitude may be few and far between in the North East, but the Local Governments have a healthy brood of little ducklings always ready to quack on their frontiers.

The result has been the gradual creation of a frontier force of five battalions of Gurkha Rifles, 4200 strong, known as the Assam Rifles.

These are kept busy restraining the energy of head hunters, slave snatchers and other raiders along the Marches of the Province.

They live in little stockade posts bristling with panjis and flying the Union Jack, veritable out-posts of the Empire.

The question arises why this large and expensive force in Assam? A glance at the map will explain. We see the mighty Brahmaputra rushing forth from the mountains spreading vast tracts of alluvial silt over the wide valleys of Assam. Here are flourishing national industries. Hundreds of thousands of acres of tea giving employment to hundreds of Englishmen and thousands of Indians. Fertile rice lands and magnificent forests also cover the plain. There are mines of excellent coal and springs of oil producing the best brands of kerosine and petrol.

Surrounding this vale of growing industry you see in the map high mountains stretching range after range in almost every direction. These are steep, inaccessible and covered with jungle. The rains which begin in April and end in November swell the small streams into raging impassable torrents.

The people of these hills are not numerous but one of them is equal to ten of the opium sodden folk of the enervating plains for whom they have the greatest contempt. Were it not for the British Raj history would rapidly repeat itself and in a fortnight the plains of Assam would be once more overrun and laid waste by Bhutanese, Akas, Daflas, Miris, Arbors, Mishmis, Chins, Kukis, Lushais and the many Naga tribes of head hunters. To restrain these gentry out-posts all round the frontiers are required. They understand no law which is not administered at the point of the bayonet. Their mouths water at the thought of the lovely time they could have butchering and looting the apostles of soul force and others in the plains.

Civil and Political Officers who govern these hill tracts therefore require a force to be ever at hand under their control for escort duty, out-post work and the ever-recurring minor punitive expeditions.

That is the "*raison d'être*" of the Assam Rifles and the same principle applies to the frontier battalions of the Burma Military Police.

Very little seems to be known in military circles about the Assam Rifles, formerly the Assam Military Police.

During the war all regular troops were removed from Assam and a new (5th) battalion of the Assam Rifles was raised making a force capable of coping with any frontier trouble or internal disturbance.

The five battalions, each 840 strong, are recruited largely from the Gurkhas with a small percentage of local hill men and a few of the more civilized Nagas.

The training, equipment and economy of the battalions closely resemble that of the regular Indian Army.

The pay and emoluments are less than in the regulars but each battalion has a permanent Headquarters station making the service popular with the connubial Gurkha.

The five Headquarter stations are Aijal in the Lushai Hills, Sadiya below the Mishmi and Abor hills, Kohima in the Naga Hills, Imphal in the Manipur State among the Kuki and Naga hill tribes and Balipara in the foot hills on the North bank of the Brahmaputra and near the marches of the Bhutanese, the Akas and the Daflas.

There are four British Officers in each battalion. The Commandant is appointed for 4 or 5 years and the three Assistant Commandants for 2 or 3 years. All are officers of the Indian Army lent to the Assam Government.

Each battalion has several permanent frontier posts, some of them many days march from Headquarters. These are frequently inspected by the British Officers. They vary from neat little forts of earth-work and masonry to rough stockades of timber and temporary huts.

This out-post work develops the initiative of the Indian Officers in command and frequent detachment duty involving independent responsibility creates a very useful body of Indian Officers in the Assam Rifles.

Special attention is given to training in jungle warfare, the force having a special code of jungle training evolved from local experience.

A musketry course suitable to the locality has been adopted, snap shooting practices kneeling and standing suitable to the jungle being substituted for some of the numerous lying or prone practices of table B. of the regular army musketry course. Each battalion has transport, either pack ponies, carts or elephants to facilitate the relief of out-posts and the despatch of punitive expeditions.

The whole force is under control of the Inspector General of Police, Assam, a Civil Police Officer. During the war a Military Officer, known as the Deputy Inspector General, Assam Rifles, was appointed to command the five battalions but since the war this appointment has been abolished on the grounds of economy.

More than three thousand Assam Riflemen volunteered and joined the regular army for service in the war. Drafts of trained men were sent out to almost every Gurkha battalion at the front as soon as they could be relieved of their duties as Wardens of the North Eastern Marches.

MECHANISM AS A SUBSTITUTE FOR MANPOWER IN EMPIRE DEFENCE.

By Capt. J. G. Smyth, V. C., M.C., 15th Sikhs.

During the past two months the one topic of military interest has been the reductions of our forces recommended by the Geddes Committee. The question of these reductions has raised discussions in many quarters as to the best and most economical way for us to protect our Empire, and it is plain that the two great demands of the British public for the defence of our Empire to-day are

(1) Economy.

(2) The greatest efficiency consistent with economy. There have been many speeches made and numerous articles written to the Press on this subject, most of which boil down to the following two main assertions.

(a) That the power of modern firearms has increased to such an extent since 1914 that the fire power of a battalion is 6 times as great as it was before the war and that therefore the number of battalions can be considerably reduced.

(b) Mechanism has to some extent taken the place of man power in modern warfare, and in the future mechanical appliances may be expected to play a still larger role. The use of the tank and the aeroplane and the other means of mechanical warfare were proved in France. Therefore as far as possible mechanical means of warfare should take the place of man-power in the defence of our Empire.

In order to prove these two assertions those who state them take examples from the Great War and quote facts which there is no gainsaying.

But a modern European battle and the defence of a large and scattered Empire are two very different propositions, difficult to compare to any great extent.

251 ***Mechanism as a Substitute for Manpower in
Empire Defence.***

To illustrate this let us take the two above assertions, A & B, in turn and consider carefully how they apply to Empire defence.

- (A) *That the increase in firepower warrants a decrease in manpower.*—No one would dispute that the modern British battalion with its 8 Vickers and 36 Lewis guns is vastly superior in firepower to the pre-war battalions with its two machine guns, even though the standard of musketry to-day may not compare favourably with pre-war standards.

But people are apt to forget that the nations and tribes lying beyond the frontiers of the Empire have not stood still during the last 7 years in the matter of providing themselves with modern weapons.

The argument for a reduction in manpower in consequence of the increase in firepower, therefore, hardly holds water. Take as an example the Mahsud tribesmen of Waziristan on the North West Frontier of India with whom we have lately had severe fighting. If the firepower of our battalions had improved 6 times since pre-war days, theirs had improved 10 times, for the difficulty of overcoming them, armed as they were with modern magazine rifles, was certainly greater than it was before the war even though we employed a greatly increased number of troops.

This campaign against the Mahsuds is a typical instance of a case when European standards and figures do not apply. The difficulty of the terrain on the N. W. Frontier of India makes it impossible for us to extract the full value from our superior weapons; he would be a bold man indeed who would say that one present day battalion, owing to its increased fire-power, could do the work of 6 pre-war battalions on the N. W. Frontier of India! And yet these are the sort of opinions, backed up by facts and figures taken from the fighting in France, that one sometimes hears put forward.

Mechanism as a Substitute for Manpower In 252 Empire Defence.

(B) *Regarding the introduction of mechanical appliances in War.*

Here again one is apt to overlook the vastness of our Empire and what the defence of that Empire means. Did the defence of the Empire consist in carrying out operations against any one definite enemy, then one might consider substituting tanks for battalions; but when one considers the very wide area we have to defend and the variety and difficulty of the terrain over which we may have to operate one may not be so ready to do so.

Experts in England have stated that the next war will see a vast increase in mechanical transport of all kinds, including tanks, but this will never do away with the infantry soldier, it will merely give him protection from fire and greater mobility. Tanks and aeroplanes, although a very great asset can never in themselves bring decisive results, even in a modern European battle: still less will they do so in the defence of such a wide spread Empire as ours.

For the suppression of internal disorders tanks and aeroplanes must be unsuitable; their action is too drastic and too concentrated. For this purpose the infantry or cavalry soldier is indispensable.

It is well to consider the above points when discussing the extent to which battalions may be reduced in the interests of economy. We must not be too rigid in applying the lessons of European warfare to every case where, owing to topographical and climatic conditions, they may not altogether apply.

Above all it is well to remember that, however much they may be assisted by mechanical weapons and by the other arms, it is in the end only by the infantry soldier that decisive results can be achieved.

This was proved in the Great War and nowhere does it apply more strongly than in the defence of our Empire.

MORALE AND PSYCHOLOGY.

*A student lecture delivered at the Senior Officers, School,
Belgaum by Major P. H. Kealy R. E.*

The intention of the following lecture was to call the attention of officers to the importance of the continuous study of the human factor during peace training, and to shew how the study of psychology might assist them in this matter. It is often objected that so little is known of the working of the human mind: this in a sense is true, for very few people have the remotest idea of how they are constituted; but it is not true that nothing *can* be known. The most intimate of the modern sciences, psychology, is devoted to this subject; but anyone who is desirous of obtaining a working knowledge of this science is confronted with certain difficulties. Books on psychology will be found either to be devoted to the subject of spiritism, or to contain largely matters of pure speculation, or to be of such an advanced nature that they are wellnigh unintelligible; it is difficult to find a book which forms a sane and intelligible introduction to the subject. Anyone desiring to find such a book cannot do better than obtain Hudson's "Law of Psychic Phenomena", which is described by the author as being a "Working Hypothesis" on the subject.

Before considering in detail the subject of my lecture to-day, let us consider briefly what is the nature of WAR. War is essentially a mental conflict. Against this pronouncement may be urged our national debt of 7000 millions; surely so large a sum could not be spent on an immaterial conflict such as that between the minds of two or more nations? Nevertheless war remains such a conflict as has been said. War is the endeavour of one nation to impose its will on another, and so is a matter of the mind; no nation is defeated till its soul admits defeat. To produce this state of mind in your enemy, you adopt various means, all directed to produce a certain effect on his soul. You go in for propaganda, to proclaim to the world the righteousness of your cause, and

to set the sympathy of the world against your foe. Your propaganda is also directed towards keeping up the heart of your own people, and depressing that of the enemy, by suggesting that things are going well or ill with them. And then also each side puts its armed forces into the field; the object aimed at by these forces is to do as much damage as possible to the enemy's men and materiel so as to produce in the mind of the enemy people the conviction that the struggle is hopeless; in other words to make the soul of the enemy admit defeat. This is the reason why in spite of the constant introduction of new elements in warfare, we are told that the principles of war never change; they are based on human nature, and human nature does not change. If you examine in this light the eight principles of war given in our F. S. R. you will find there is only one basic principle, that of the offensive; for it is only by the offensive that you can impose your will on the enemy. The handmaiden of the principle of the offensive is that of surprise; human nature remaining the same, surprise has the same value now as it had in the time of Gideon, who with 300 men put the hosts of the Midianites to flight. The other six principles given are corollaries, and show how best to attain these two.

This is the view of war propounded by all the great thoughtful military writers of all nations; and furthermore they point out with great force that it is only by the constant study of the human soul that successful warfare can be waged.

Col. Henderson writes in "The Science of War".

"Human nature, the paramount consideration of either tactics or strategy, remains unaltered. The art of generalship, the art of command, whether the force be large or small, is the art of dealing with human nature".

"The first thing is to realize that in war we have to do not so much with numbers, arms and manoeuvres, as with human nature. What did Napoleon find in the history

of the campaigns of Alexander, Hannibal and Julius Caesar? Not merely a record of marches and manoeuvres, of the use of entrenchments, or of the general principles of attack and defence. No, he found in those campaigns a complete study of human nature affected by discipline, by fear, by the need of food, by want of confidence, by over-confidence, by the weight of responsibility, by political interests, by patriotism, by distrust and by many other things."

"Wellington well knew that the issue of battles lies in the hearts of men—in the heart of the commander even more than in the heart of the soldiers—and that human nature, even when disciplined, is peculiarly susceptible to a strong, sudden, and sustained attack".

A French writer, Ardant Du Picq, says:—

"Battle is the final objective of armies, and man is the fundamental instrument in battle. Nothing can wisely be prescribed in an army—its personnel, organisation, discipline and tactics, things which are connected like the fingers of an hand—without exact knowledge of the fundamental instrument Man, and his state of mind, his morale, at the instant of combat".

Our F. S. R. say "War is the ultimate resort of policy, whereby a nation seeks to impose its will on its enemies".

"The aim of a nation which has taken up arms is to bring such pressure to bear upon the enemy people as to induce them to force their government to sue for peace."

"The development of the necessary moral qualities is the first object to be attained in the training of an army."

(FOOTNOTE.—It is curious that so little subsequent mention of this "first object" is made in our regulations. Here it is not even printed in heavy type, whereas the statement that 'NO ONE OTHER THAN THE DRIVER IS TO RIDE ON ANY CART OR WAGON OR TRANSPORT ANIMAL WITHOUT A WRITTEN ORDER FROM AN OFFICER' is so printed.)

Having arrived therefore at these conclusions regarding war and the mind of man, what precisely is the meaning of the words *Morale* and *Psychology*?

Morale is used in military writings in the specialised sense of "fighting spirit". It is spelt in two ways in our F. S. R. on consecutive pages, as "moral" and "*moral*". Most dictionaries give it the wider meaning of "mental state, as of a body of men, an army and the like", and spell it "*morale*". We also use the expressions "moral qualities" "moral effect" and so on. I think we shall get a clearer view of the matter, as I hope to explain later, if we keep in our minds that we have to deal with "mental" states, qualities, effects etc.

Now in considering this mental factor in war and training for war, we labour under the disadvantage that we cannot see with our eyes a person's mind or an army's mind; we can go round and count how many guns our enemy has, how many men etc; but when we come to the mind, we can only reason from incomplete data, and cannot check our conclusions definitely beforehand. The predominating importance of this mental factor is apt to be overlooked in peace time, because all the time we are training, the material side bulks largely on the horizon, and our attention is occupied in the problems of the actual movements of men, guns and materiel; whereas really the ultimate object of these movements is only to produce mental effects. It is obvious therefore that we must seek what aid we can to help us to realize and cope with this mental factor. Such an aid is that of *Psychology*.

Now *psychology* is a science; it is the science which classifies and analyses the phenomena or varying states of the human mind. In other words, it is the science that deals with *morale*. And yet strange to say it is a thing which is not touched upon in our education, and we are left to pick it up as best we may, or not at all.

Now what has modern psychology to tell us of the make-up of the human entity? In the following description I do not wish to dogmatise or lay down the law; there are many different books giving different ideas and thoughts on the subject; but I shall follow Hudson, the first writer, I believe, to classify the phenomena of hypnotism, and from his observations to attempt to put psychology on a truly scientific basis. You are all probably more or less familiar with hypnotism from seeing public performances; as you know, the subject is put into a state of somnambulism, and is generally told he is some animal, and he acts the part accordingly; or he is told he has a bad pain in his stomach, and he moans and writhes in agony till it is suggested to him that the pain has gone. These of course are somewhat elementary examples of the subject. Hudson, who is an extraordinarily clear and logical writer, did not publish his results till after thirty years of study of this subject.

These are the conclusions he came to; Man is composed of three parts,

- (1) The conscious mind.
- (2) The subconscious mind.
- (3) The body.

Hudson himself calls these two minds the objective and subjective minds. Other writers call the second mind the unconscious, or the subliminal mind, and look upon both minds as really one with separate regions; a man being conscious of the processes that go on in one region, and unconscious of those of the other region. But Hudson contends that the phenomena and physical structure of man all point to the fact that there are two separate minds; that everything happens exactly as though there were two minds, and that therefore we are justified in assuming that there are two minds until the contrary is proved. And this view of the subject I think makes it all more intelligible.

The characteristics of these three parts of the human being are given as follows;

The *conscious* mind is the mind of our five senses, with which we take cognisance of the world around us, and adapt ourselves to our physical environment. It has the following characteristics.

- (1) It depends for its functions on the brain.
- (2) It has no emotions.
- (3) It is pure intellect.
- (4) It has an imperfect memory.
- (5) It can reason both inductively and deductively, i.e. from the particular to the general, and vice versa.
- (6) It controls the voluntary functions of the body, and has its own nerve system running to the brain.
- (7) Its powers are regularly blotted out by sleep, and may be blotted out by hypnotism or by an accident.
- (8) Being a function of the brain, it ceases to exist at death.

The *subconscious* mind is your soul, and has more wonderful powers still.—

- (1) It is the seat of the emotions.
- (2) It is the seat of the instincts.
- (3) It is always amenable to control by suggestion.
- (4) It has a potentially perfect memory.
- (5) It has the power of intuitive perception of the laws of nature; witness musical and mathematical prodigies.
- (6) It has the power of receiving and transmitting thought without limitation of time and space, and without using physical means (telepathy).
- (7) It has the power of moving ponderable objects without using physical means (levitation).
- (8) It has potentially perfect powers of deductive reasoning, whether the premises are true or false, witness the example from hypnotism above, and the conduct

Morale and Psychology.

of a person to whom the suggestion has been made that he is a dog or a cat.

- (9) It cannot reason inductively.
- (10) It has its own nerve system in the body, and controls the automatic functions of the body.
- (11) It can on occasion take complete control of the whole body for instance in cases of extreme and sudden bodily danger, when you do the 100 in under 9 secs.
- (12) It never sleeps.
- (13) It is the source of all energy.
- (14) It is potentially immortal.

The type of phenomenon that first led psychologists to suppose that the memory of the subconscious mind is potentially perfect is that sometimes displayed by patients during illness, when they are delirious. It is no uncommon thing for a person during delirium to talk in a language which they have spoken as a child or perhaps have only heard as a child, when the memory of their conscious mind has not retained a word of it.

There are generally held to be two primary instincts, the one self-preservation, and the other self-reproduction. But Hudson holds that self-reproduction is only a part of a wider instinct that he calls the Evolutionary instinct; the instinct that has urged living matter upwards in its long course of evolution from its humble beginnings till it has reached the stage of Man. If this is so, you will see that at times there must be a clash between these two instincts, when the individual is sacrificed for the good of the race; hence it may also be called the Altruistic instinct, in which lies the ultimate development of the human race.

The Body is dependent on both minds; on the conscious mind for its voluntary actions, and on the subconscious mind for its automatic functions and for its general health.

From the different properties of the two minds just enumerated it follows that, in the sane and healthy person, the conscious mind must be the controlling mind. It is fitted for this task because

- (1) It has no emotions; you must not have an emotional judge.
- (2) It is not suggestible in the same sense that the other mind is.
- (3) It has full reasoning powers, and so is fitted to decide on any matter presented to its consideration.

The subconscious mind on the other hand is unfitted for control, because

- (1) It is the seat of the emotions.
- (2) It can only reason deductively.
- (3) It is always amenable to control by suggestion.

Lack of control by the conscious mind leads to immorality, vice, crime, or to eccentricity and in extreme cases to madness. In the undue development of the subconscious mind, or the psychic powers of that mind lies the danger of this loss of control by the conscious mind; and the same danger lurks in employments that become automatic, such as type-writing and type-setting.

Hudson summarizes the differences between the two minds thus—"The real distinctive difference between the two minds seems to consist in the fact that the conscious mind is merely the function of the physical brain; while the subconscious mind is a distinct entity, possessing independent powers and functions, having a mental organisation of its own, and being capable of sustaining an existence independently of the body. In other words it is the soul."

This then is the picture of yourself that modern psychology gives you; a being with two minds, one suited to deal with your physical environment and to control the other; the other mind

your soul, endowed with the most wonderful powers and possibilities, the seat of your emotions, instincts and desires ; the source of all your energy ; and started off in this life with instincts and inherited qualities which throughout life are played upon and influenced by environment, education and intercourse with your fellow men. It is this part of you which is the dominating factor in war, your mind *par excellence*.

I do not know if the respective roles of these two minds in every day life are clear to you. The conscious mind appreciates the situation, and lays down the course to be followed ; whether you act upon that decision depends upon the extent to which your feelings, *i. e.* your subconscious mind, are under control. You may give your feelings rein, and act "contrary to your better judgment" as we say. Or circumstances may be such that from surprise or terror the conscious mind fails to act, and the subconscious mind takes complete control, and you get panic and other phenomena.

Now a word about habits. You are told in your training of the importance of forming habits of thought, habits of action, etc. When an action has been repeated sufficiently often you cease to have to think about its performance ; in other words it ceases to be a function of your conscious mind and passes to the subconscious mind, coming under the heading of instinct. The importance of the the habit lies in this, that we are told that "at the first shot memory flees." The brain becomes numb, and as the heat and stress of an action increases, so does the conscious mind tend to function less and less. The subconscious mind takes charge, and the correctness of your action will depend upon the correctness of the habits you have formed. A habit, however, has its dangers, for if for any reason you want to act contrary to it, you must make a conscious and deliberate effort to break away from its path, other wise it will let you in.

There are two points I would especially direct your attention to ; one is the suggestibility of the subconscious mind, the other is the dependence of the body upon that mind for its health.

" Suggestion " is an extraordinarily subtle force, and the discovery of this law may be said to be the outstanding fact in the history of modern psychology. The mechanism of suggestion is thus described by one of the modern schools of psychology in France ;

(FOOTNOTE.—See " Suggestion and Autosuggestion " by Baudouin.)

An idea is presented to the subconscious mind which it accepts and adopts as a motive for action ; it then carries on the necessary processes for making the idea effective, *without the cognisance of the conscious mind*. Herein lies its subtlety. The result emerges into consciousness as a settled opinion, a strong impression on some subject, or an impulse to some course of action. The original idea may come from three sources ; it may come from outside, from the spoken word or from something witnessed, even unconsciously ; or the idea may come spontaneously from your own mind ; or you may present the idea deliberately to your own mind. The process which goes on without our cognisance in the subconscious mind is, perhaps, analogous to what we often experience when we try to remember a name which persists in escaping us ; when we give up the struggle to remember and pass on to other things, suddenly the name, *à propos* of nothing, flashes into our mind.

If you think things over, the far-reaching effects of this force of suggestion are enormous. Remember the perfect memory of the subconscious mind, and how many things you see and hear that go clean out of your conscious memory ; how many things that you see and hear even that you are quite unconscious of at the time ; and then recollect that all these things are stored up in the memory of your subconscious mind. You think that you are arriving at an unbiassed and

independent opinion on some matter ; how do you know that something that you may have heard and paid no attention to, or something even that you have not consciously heard at all is not materially affecting your judgment ? The thing ranges from the simplest cases such as we spoke of under hypnotism to the most subtle processes. What are propaganda and advertisements but a campaign of suggestion ? Who has not seen or heard of the O. C. run by his adjutant, or the G. O. C. by his staff officer ? How is this done without the superior being aware of it ? By suggestion. What is the explanation of the predominance of a handful of whitemen amongst a population of millions of Eastern people ? Prestige, working by the force of suggestion on a psychic people. And a point to remember is, especially at the present time, that what has been produced by suggestion can be destroyed by suggestion ! Instances of the working of this force can be multiplied indefinitely.

The other point I called your attention to was the dependence of the body on the mind for its health. The physical mechanism by which the subconscious mind controls the body has been traced out by Hudson in one of his books and there is available a mass of evidence of the fact in the numberless cases of 'faith healing', and cures by suggestion of disease, not only functional but organic. The phenomenon of people through fear of a disease during an epidemic developing all the symptoms of the disease and actually succumbing, without really having the disease at all, is not unknown. But the importance of the subject, from our point of view, lies in our realization of the fact that we have to keep the minds of our men tuned up to withstand disease. And to do this, you must know the characteristics of your men and what appeals to them and interests them. The problem is especially difficult, and at the same time important, when a lull occurs in operations ; it is then that men are very liable to go sick. The explanation perhaps is that the mind, with little of interest to

occupy it, dwells on the discomforts and beastliness of active service, and wishes it was all over. Now the researches of Freud and other modern psychologists seem to show that the subconscious mind is a very tricky thing, and that it will go to any lengths, and adopt any means to attain its own ends. If this is so, and remembering the dependence of the body on the subconscious mind, sickness is an obvious means for attaining its own ends; in this case, that is, to be rid of the dangers and discomforts of active service. It might in fact be described as entirely unconscious malingering. The problem of coping with this that faces the officer would be especially difficult in a country like Mesopotamia, as it is not sufficient to keep men occupied with aimless work that they do not see the object of, or that does not interest them. I believe I am right in saying that on the western front the incidence of disease during the war was the lowest on record. Of course a great deal of this was due to the advance in medical science, to the control of causes of disease and to improvements in sanitation; but I think an equally important point was the mental factor. The war was being waged near home; short leave home was a possibility always present in the mind; except when actually in the front areas, the troops were billeted and in greater comfort than is usual in a campaign; they were well fed and well cared for, and their amusement was catered for; in a word the mind was kept in a favourable condition to enable the body to resist any disease that might come along. On the other hand a new ailment appeared under the general name of "shell-shock", which is now found to be a mental condition which may produce certain symptoms in the body, and which is curable by the methods of psycho-analysis.

The next point we must touch on is the question of what is called the "group mind". The group mind that we are concerned with, that of the regiment, etc., does not differ materially from that of the individual, but certain charac-

Mercle and Psychology.

independent opinion on some matter; how do you know that something that you may have heard and paid no attention to, or something even that you have not consciously heard at all is not materially affecting your judgment? The thing ranges from the simplest cases such as we spoke of under hypnosis to the most subtle processes. What are propaganda and advertisements but a campaign of suggestion? Who has not seen or heard of the O. C. run by his adjutant, or the G. O. C. by his staff officer? How is this done without the superior being aware of it? By suggestion. What is the explanation of the predominance of a handful of white men amongst a population of millions of Eastern people? Prestige, working by the force of suggestion on a psychic people. And a point to remember is, especially at the present time, that what has been produced by suggestion can be destroyed by suggestion: instances of the working of this force can be multiplied indefinitely.

The other point I called your attention to was the dependence of the body on the mind for its health. The physical mechanism by which the subconscious mind controls the body has been traced out by Hudson in one of his books and there is available a mass of evidence of the fact in the numberless cases of "faith healing", and cures by suggestion of disease, not only functional but organic. The phenomenon of people through fear of a disease during an epidemic developing all the symptoms of the disease and actually succumbing, without really having the disease at all, is not unknown. But the importance of the subject, from our point of view, lies in our realization of the fact that we have to keep the minds of our men tuned up to withstand disease. And to do this, you must know the characteristics of your men and what appeals to them and interests them. The problem is especially difficult, and at the same time important, when a lad occurs in operations; it is then that men are very liable to go sick. The explanation perhaps is that the mind, with little of interest to

occupy it, dwells on the discomforts and beastliness of active service, and wishes it was all over. Now the researches of Freud and other modern psychologists seem to show that the subconscious mind is a very tricky thing, and that it will go to any lengths, and adopt any means to attain its own ends. If this is so, and remembering the dependence of the body on the subconscious mind, sickness is an obvious means for attaining its own ends; in this case, that is, to be rid of the dangers and discomforts of active service. It might in fact be described as entirely unconscious malingering. The problem of coping with this that faces the officer would be especially difficult in a country like Mesopotamia, as it is not sufficient to keep men occupied with aimless work that they do not see the object of, or that does not interest them. I believe I am right in saying that on the western front the incidence of disease during the war was the lowest on record. Of course a great deal of this was due to the advance in medical science, to the control of causes of disease and to improvements in sanitation; but I think an equally important point was the mental factor. The war was being waged near home; short leave home was a possibility always present in the mind; except when actually in the front areas, the troops were billeted and in greater comfort than is usual in a campaign; they were well fed and well cared for, and their amusement was catered for; in a word the mind was kept in a favourable condition to enable the body to resist any disease that might come along. On the other hand a new ailment appeared under the general name of "shell-shock", which is now found to be a mental condition which may produce certain symptoms in the body, and which is curable by the methods of psycho-analysis.

The next point we must touch on is the question of what is called the "group mind". The group mind that we are concerned with, that of the regiment, etc., does not differ materially from that of the individual, but certain charac-

teristics are intensified. Especially is the suggestibility of the group greater than that of the individual, above all where there is community of outlook and ideals, and emotion is stirred. The unorganised chance crowd may be summarised as emotional, impulsive, violent, fickle, inconsistent, irresolute, extremely suggestible, and liable to form imperfect and hasty judgments. But in the organised groups of the army, you do not meet with these characteristics in their full development, except perhaps in the one case of panic which may attack even the best troops from the most trivial causes.

Now the question you will probably ask, being practical men, is "what use is this theoretical knowledge going to be to me in my job?" You may feel that you have got on very nicely up to date without bothering your heads about the possession of two minds, and so on. Well the question seems to be whether on looking back you do not think you would have been a more efficient and useful officer if you had possessed more of the knowledge that I have indicated? We are not all born with an instinctive knowledge of the human soul; if we were, and had the requisite brain, we might all be Napoleons or Wellingtons. As it is, we must take what help we can get, and such a help is that of applied, and not purely theoretical, psychology. I have tried to indicate to you already some points where you may derive assistance, and let us examine the matter further.

First of all, do you know yourself? Can you have a thorough knowledge of yourself if you don't even know that you have two minds, and that you may be stampeded at a critical moment by a part of you of whose separate existence you have formed no clear conception? Have you a reasoned idea of how to control yourself, your feelings, your impulses? Do you ever lose your temper, make yourself ridiculous, and then wish you had not? Have you any faults you would sooner be without? Have you good qualities whose strength you wish to increase? Psychology tells you that you have an instrument to your hand in this force of Suggestion.

Then you have to deal with individuals; do you know what man's strongest natural instincts are, and how by suggestion to control them, or divert them into useful channels? You have to select men for jobs of varying degrees of importance and responsibility; are you by nature an unfailing judge of character, or do you make mistakes and feel you would be glad of some help in arriving at a man's character? Don't you think that a knowledge of the make-up of the human mind, of its strength, its impulses and its weaknesses will enable you better to attach a proper importance to such indications as a man may give, and so to judge his character more correctly?

Next in dealing with the group, what do we find? In the army you have a series of organised groups, whose suggestibility is very great for the following reasons;

- (1) They are organised for a common purpose—War.
- (2) The regiment has a long tradition behind it, and esprit de corps.
- (3) The individuals of the group are men of much the same social standing, education and outlook on life.
- (4) Many, or most of them, come from the same part of the country.
- (5) The regimental group forms one of many similar groups, which go to make up an army.
- (6) The army is representative of the nation.
- (7) The national appeal is held to be the strongest of all to modern peoples.

In other words you have community of outlook and ideals, and the stirring of emotion. You have therefore to your hand all the most favourable elements for carrying out the principle of suggestion, and directing to any good end the corporate feeling that already exists.

— All the training in peace must be directed to the requirements of war. It is pointed out that human nature can stand

only a certain amount of terror without the instinct of self-preservation taking charge. One of the great problems of war is to know where that breaking point comes, what you can ask your men to do, and what you can't. There is a mass of personal experience of this sort available in the minds of officers who have been through the war, and it is thousand pities that apparently no systematic effort is being made to collect this information, for the instruction of those officers who are coming after and who have not got this first hand knowledge. The problem as I see it is to train your men in such a way as to defer this breaking point as long as possible. Different nations tackle this problem in different ways, according to their national idiosyncrasies. What you have to combat is this strong primary instinct of self-preservation, and some nations try to do this by a brutal discipline; to, as it were, make one terror stronger than another. But no terror of this sort can hope to prevail against the unreasoning terror of immediate death. Our way is, while maintaining a strict discipline, to endeavour to make one primary instinct stronger than another, *i. e.* to strengthen the evolutionary instinct at the expense of the instinct of self-preservation. If you have a working knowledge of psychology, you can tackle the task with confidence, remembering this all-powerful force of suggestion. We saw that the regiment, with its community of outlook and ideals, and its emotional factor, is extraordinarily suggestible; and the study of human nature shows further that to the group mind it is the high ideal that makes the strongest appeal, *i. e.* the sinking of the good of the individual in the good of the group, and that is the definition of discipline in its highest form.

The line to follow then seems to me to be as follows—you must first endeavour to win the liking and respect of your men; the reason for this is that the mind accepts suggestion more

(FOOTNOTE.—"The group mind" by William McDougall, F.R.S.)

readily from a source that it likes than from a distasteful source. You see this especially in the case of children, and your men are only big children. You can then inculcate your lessons of duty and self-sacrifice, knowing that they will bear fruit. You can appeal to pride of race, pride in the army, pride in the regiment, to prejudice, to their weaknesses even turning them into strength, and so create that impalpable thing called atmosphere, the result of a body of men all feeling in the same way, and actuated by the same ideals. It does not matter what the immediate matter in hand is, musketry or digging or what not, the principle is the same. You heard of the extraordinary differences in the recognised tasks of digging in different regiments, in the lecture on Defences; set your standard high and you will get it, set it low and you will get it equally. A bad regiment is the fault of bad officers, who either do not know how to manage their men or do not care. With this in your mind you will then maintain in your men that tradition of steadfastness in battle, which is the heritage of the British soldier and the admiration of the world.

I heard it expressed poetically the other day that by the time officers attend the S. O. S. here, they have reached the sunset of their days! Well, before our suns finally set, many of us, I hope most of us, will have to fill the most responsible post of our career, that of a C. O. As a C. O. you are responsible for the training of your officers and men. Are you going to teach your officers that the basis of their profession is the study of human nature? That is the teaching of history, and the teaching of your regulations. If so, would not a working knowledge of psychology help you and them?

I have said a lot about "suggestion" in this lecture, and I will leave the following suggestions with you, which may or may not bear fruit--

Morale and Psychology.

- (1) Man is the fundamental instrument in battle.
 - (2) Marshal Foch calls attention to the dangers of peace-time soldiering, in that the material factor looms largest, whilst the factor of morale cannot either be clearly grasped or made use of.
 - (3) Morale is the mental condition of an army.
 - (4) Psychology is the science that deals with morale.
-

The Creighton Memorial Lecture, "Napolean and the British Navy after Trafalgar", by Sir Julian Corbett is published in the Quarterly Review. Few people have read much, except perhaps in the pages of de Vigny, of our naval operations between Trafalgar and Waterloo. It is generally assumed that Nelson's great victory placed British Naval Supremacy in an unassailable position. Actually this was not the case. Napoleon set every dockyard in Europe to hammer out ships, and his ceaseless efforts to regain the command of the sea caused very real anxiety to our government. Here lay the source of the apparently futile and uncoordinated military expeditions despatched all over the world. The situation was this: Pitt's coalition had been broken at Austerlitz, had died at Jena and at Tilsit, had been resurrected, but now, not against Napoleon, but against England. The continental boycott had been declared. England stood alone. The sea was at once her shield and her source of life and staying power. Her fleet was powerful; and in excess of troops for Home Defence she had what was known as a disposal force. How should the latter be employed? It could hardly march single-handed on Paris or Berlin. No—for the moment it must act as an adjunct to the Navy. Firstly in maintaining command of the sea—in the expeditions to Copenhagen and the Tagus whereby neutral fleets were safely withdrawn from the Emperor's reach; and then in the operations at La Basque and round Sicily. Secondly it was the duty of the army to secure new markets to replace those lost by the boycott in Europe. Hence the expeditions to more distant seas. All this amphibious warfare has furnished a butt for the military historian, but it is difficult to see that concentration of effort would have been advisable in those days, for a definite objective was lacking. At Walcheren the situation was different. We had then embarked on important military operations in Portugal and a diversion of a large force to another object supplies material for more serious criticism. On the other hand the blow at Flushing caused for more

perturbation to Napoleon than did our Peninsular operations at that period. "In all my Empire" he had written, "this is my weakest point and the only one at which it is possible to deal me a blow." Further, judgement as to correctness of conception is apt to be clouded by the effect of marked ability in leadership in the one sphere, and of incompetence in the other. The army having fulfilled its task as an auxiliary to the navy, it then became the duty of the navy to help the army; and Wellington gratefully acknowledged the services rendered by our fleet by keeping open his line of communications throughout the long Peninsular war.

In the same magazine Lord Sydenham deals with the naval war of 1914-15, reviewing Sir Julian Corbett's official history, Ian Hamilton's Gallipoli diary and sundry German books on the subject, without, however, breaking any fresh ground.

Another article "The problem of modern industry" is well worthy of study. Professor Zimmermann aims at no cut-and-dried solution of the difficulties involved, knowing that would spell certain failure. He merely states the elements of the problem and indicates the general lines on which solution may safely be sought. He reasons that "as the primary activity of a government is to govern so the first principle of economics.....is to keep the household supplied with the goods and services indispensable to.....civilized existencesupply is the pre-requisite for distribution, and if we are forced to choose, between a lesser supply accompanied by a more equal distribution as against the maintenance of the existing supply, we shall be assuming a grave responsibility if we depart from our axiom and choose the former." The soundness of this reasoning is clearly shown by conditions in Russia. But if we accept it as axiomatic as we did before the war and as we incline more and more to do once again we assume another grave responsibility—that of rendering

tolerable the life of the labourer—the under-dog. Whether from patriotic or philanthropic motives, the worker must be saved from the emasculating and stupifying effects of machine-drudgery and lifted to a plane where the corporal and mental senses will aspire for relaxation to higher things than watching football and attending cinemas. Education in citizenship, decentralization of responsibility in factories, team-work, variety of occupation and, for certain forms of labour, industrial conscription; these are the general lines along which the writer suggests that experiments should be made.

"From Private to Field Marshal"—the soldiering autobiography of Sir William Robertson has not received a sufficient meed of praise from reviewers. It is a story of a career without parallel in our army, and it furnishes inspiration on every page. In spite of the handicap of eleven years in the ranks, which might well have destroyed the hopes of high preferment, Robertson as Lieutenant and Captain in this country worked away, undeterred by heat or cold till he had passed in no less than six Indian languages. And this was not done at the expense of his regimental duties or of his physical fitness for he took his regiment to the top in signalling and was for several years the best man-at-arms in the big tournament at Rawal Pindi. His industry was rewarded by staff employment and once on the ladder of success he climbed with the assurance due to outstanding merit. Few men have been so completely the "master of their fate", few men have so fully justified the truth of the lines,

"Abroad in arms, at home in peaceful kind

Who seeks by constant toil shall soonest honour find."

"The soul and body of an army", by Sir Ian Hamilton, is unequal both in matter and style. Well written on the whole, it is marred in places by diffuse and involved sentences, in others by descents to mere journalism. A high

literary reputation seems to rest heavily upon the author and in his endeavour to sustain it he discards simplicity—the most potent weapon in the armoury of the pen. As to matter most readers will find themselves alternately in cordial agreement or disagreement with the theories expounded. The statement that, when Haldane took up the reins at the War Office, the war was won, may be classed as pure idolatry. When Haldane took office the reorganisation of our forces was long overdue and was being hardly pressed by all thoughtful soldiers. With finished continental models to study and with the assistance of some very able professional advisers he instituted some excellent reforms. He also made some bad mistakes but the balance of merit was on his side and he may be classed as an excellent war minister. *Mais voilà tout.* The author is still a strong protagonist of voluntary service in spite of its failure during the war and argues his case much as if the war had never taken place. Many of the chapters, on the other hand, especially those on discipline, training and patriotism are quite first class. He makes a very strong case for a defence minister and writes ably on modern methods and engines of war. Finally, he draws a very valuable comparison between educational systems in our public schools and in our state schools, and calls for more of the spirit and less of materialism in the latter. "When a lover swims to his love across the stormy Hellespont: when an admiral sinks with his ship after ordering all hands to the boats: when a man prays God that his life may be accepted for that of his wife or his child, the gallery of fellow mortals takes courage, and even as they view the victory of the incorruptible over the corruptible, feel immortality stir within their souls."

Mr. Frank H. Simonds, able writer as he is on international affairs, succumbs in marked fashion to local influences. He is revisiting Paris after an absence of 3 years and records

his impressions in the April number of the *American Review of Reviews*. He writes prior to the Conference at Genoa and his considered opinion is that the policy of Great Britain will be there, as elsewhere, to isolate France and then coerce her by the concentrated strength of countries, including Russia and the German Republic, which have rallied to British leadership. (For so acute an observer it is a little wide of the mark to describe Russia as having rallied to our leadership.) France strongly resents British and American criticism of her militarism and also that she should be classed as a 3rd class naval power because owing to her military efforts during the war she could not spend much on ships. Is she to be bound for ever at a level that places her at England's mercy? Her sea communications are more than ever important now that she depends for so much of her man-power on her African colonies. There is an impression abroad that France can be brought by gentle pressure to view the matter of reparations, and the maintenance of a force equal to exacting them, in a more kindly light. But nothing can be more inexact. France has a perfectly clear notion of her responsibility to France. She insists that Germany should rebuild France, and she is determined not to be invaded a second time.

General d'Urbal puts the matter even more definitely in the *Review Militaire Generale*. He gives a short but clear description of the measures that will be necessary in the event of future trouble with Germany. No more wars on French territory! Not even a base on the Rhine! The covering troops would push at once to a line from Donau-
shingen on the Upper Danube by Stuttgart, Hanau on the Maine, Dortmund to Ahaus near the Dutch frontier, between which line and the Rhine there is a zone averaging 50 kilometres in depth. Behind these troops the armies of France mobilize and advance ready to move against Berlin, or against Munich or against both these towns.

Ourrout Literature.

The covering troops would number about 300,000, the northern group (to threaten Berlin) 800,000, the southern group (to threaten Munich) 600,000 with a central reserve of 200,000,

The whole of the first echelon would be maintained on a war footing in peace; of the remainder cadres only would exist in peace, the total peace strength amounting to 610,000. As to the composition of the forces, mobility must be the ruling factor. No more wars of position for the Frenchman if he can avoid them. (As we read this article it is nice to think we won the war that was to end wars.)

SECRET
CONFIDENTIAL
THE JOURNALIST

I. Military and Political Situation in Poland

The German army has been in Poland for a year as could be seen from the numerous instances. It has been in the country for a long time but was all the while in the hands of the German from politics. It has been in the hands of the German must find new ways which are not in the hands of the German. There is no great reason why the German army should be in the hands of the German in civil life. The German army is in the hands of the German to get acquainted with the German army. The German army is enlisted and the German army is in the hands of the German whether ever there is a German army. The German army is in the hands of the German nation's interests. The German army is in the hands of the German only the German army is in the hands of the German will be impossible. The German army is in the hands of the German to Poland and Czechoslovakia. The German army is in the hands of the German supply of officers personnel and officers. The German army is in the hands of the German but more will be required. The German army is in the hands of the German large families of the German army. The German army is in the hands of the German with officers. The German army is in the hands of the German that is a very important matter. The German army is in the hands of the German domestic matter. The German army is in the hands of the German friction between the German army. The German army is in the hands of the German over between the German army. The German army is in the hands of the German right saying something about the destruction of the German army. The German army is in the hands of the German and the German army. The German army is in the hands of the German are written with the German army. The German army is in the hands of the German or merely in the German army. The German army is in the hands of the German of the German army. The German army is in the hands of the German the German army.

The covering troops would number about 300,000, the northern group (to threaten Berlin) 800,000, the southern group (to threaten Munich) 600,000 with a central reserve of 200,000,

The whole of the first echelon would be maintained on a war footing in peace; of the remainder cadres only would exist in peace, the total peace strength amounting to 610,000. As to the composition of the forces, mobility must be the ruling factor. No more wars of position for the Frenchman if he can avoid them. (As we read this article it is nice to think we won the war that was to end wars.)

REVIEWS.

276

Militär Wochenblatt.

7th January 1922.

I. Military and Political retrospect of the year 1921.

The German army has done as well during the year as could be expected in unfavourable circumstances. It had to keep out of the Polish embroglio but was all the better for that. It wants freedom from politics to enable it to develop peacefully. It must find new ideals without forgetting the old ones. There is no great keenness shewn at present on entering the army although the ex-soldier is well looked after in civil life. This is not surprising, for a nation has to get accustomed to the new circumstances of an enlisted army. Whether the experiment succeeds or whether even piratic France will eventually see that a nation's measures of defence should be left to itself only the future can shew. Eventually, however, it will be impossible to refuse to Germany what is allowed to Poland and Czecho-Slovakia. The question of the supply of officers presents no great difficulty at present, but more will be required later. They should be drawn from large families of the class that has always supplied the army with officers. Chances of promotion may not be great but are quite as good as before the war. The article then leaves domestic matter for a very favourite theme—the constant friction between England and France, the chances of a war between these two Powers, the probable use of long ranging coast-guns against English towns, the probable destruction of English commerce by French U. boats, and so on.

Whether such articles are written with a view to "separating very friends", or merely to draw comfort from a hopeful future is hard to say; but it is clear that, in either case, we have to deal still with an unregenerate Germany.

II. *Von Bethmann Hollweg's Book*.—By General Ludendorff. Ludendorff says that in his book, "Strategy and Policy", he often came to very different conclusions from those arrived at by the late Chancellor.

Basing his views on the naval archives and on Tirpitz's book. He says the Chancellor hampered the sea strategy at the beginning of the war in fatal fashion. Also that v. Bethmann lost a great chance in 1916 by opposing unrestricted U-boat warfare. Lord Lee made that clear at Washington when he said that the result of the war might have been different had the Germans started their submarine operations earlier. Ludendorff says that the Chancellor failed to realise that America would in any case have come into the war even without the U-boat affair had victory inclined seriously towards the Germans. This fact was confirmed recently by Mr. Tumulty, private secretary to the President, and cannot be stated often enough to those who wish to understand the policy of Germany in the war.

Von Bethmann stated Ludendorff to be against concessions to democracy, regarding them as a pure sign of weakness. Events, says Ludendorff proved his views to be only too correct. The franchise of April 1917 was the beginning of the end.

The friction, alleged to have existed between Ludendorff and the Emperor was a myth the former was always a faithful servant but as such felt bound to point out the harm being done by the execution of the Chancellor's policy. In July 1917, he had to insist with all the power at his command on von Bethmann's dismissal.

III. *Prospects of war in the Far East*.

This is taken from a series of articles by Dr. Krause. The author does not regard such a war as likely in the near future. England has suffered and is suffering too much to want war. She can no longer keep her place as mistress of the seas. Hence her wish for the Washington Conference

and a Naval Holiday. Of the two great opponents in the East America is the stronger both physically and financially. She has large reserves of war material and a vast population on which to draw. Japan on the other hand has lost her previous military superiority and any attempt on her part to enter into a competition in armaments would lead to financial ruin. As it is she is paying $3\frac{1}{2}$ times as much as her rival on war preparations. She might take the Philippines and strike a blow at Alaska but she could do no good by making a base in Mexico or South America and she would suffer heavily from industrial war and hunger blockade. Moreover America would be further strengthened by the aid of Australia and Canada. America might indeed go to war now in order to profit by her present superiority of force but England stands in the way. Japan should avoid war, should try and improve her relations with China, make a compromise with America and maintain her alliance with England. In fact her policy should be one of quiet development.

IV. *The crisis in the Italian army in October 1917.*

By General. v. Hofacker.

A continuation of the endeavour on the part of the author to fix the responsibility for the failure, on the 29th October, of the 5th and 26th German divisions to wheel to the left and thus cut off the 3rd Italian army.

V. *The customs of war.*—By Lt. General v. Winterfeldt.

A criticism of the French methods of examining prisoners of war based on a statement in Jean de Pierrefeu's book, "G. Q. G.", concerning the information obtained prior to the German attack on the Chemin des Dames in May 1917.

VI. *The new income tax.*

This shews a considerable reduction, which is curious; 10 per cent. instead of 20 per cent on incomes of M. 50,000; 23 per cent. instead of 40 percent on incomes of M. 200,000. The financial year is now being made to conform to the calendar year, so the new rules come into force on the 1st January.

14th January 1922.

I. *Von Bethmann Hollweg's Book*—By General Ludendorff. (cont).

Ludendorff here endeavours to show that von Bethmann was wrong in imputing to the O. H. L. the failure to make an earlier peace with Russia. He makes the point that O. H. L. was quite ready for the peace but was not going to allow the rather doubtful possibility of it to influence adversely their military operations. The subject was one that teemed with difficulty for the Germans, who wanted to make peace with Russia, keep peace with Austria and, at the same time, to add to their strength the military force of Poland by proclaiming an independent kingdom of Poland, to which neither Russia nor Austria would agree.

According to Ludendorff, peace was impossible in 1916, because the influence of the British Ambassador was too strong; and when, in 1917, the Czar made his offer of peace to Court Czernin, the British Ambassador promptly dethroned him. O. H. L. acknowledges it made a mistake in trying to establish a kingdom of Poland but refuses to accept responsibility for other failures ascribed to it as regards Russia.

II. *Italy's military activity from 1915 to 1917.*

An article by General v. Cramon discrediting a recent Italian book in which a considerable value is claimed for Italian arms in the world war.

III. *The Army of France.*

An extract from an article of General Lecroix in the "Times", showing that France will be able to dispose of from 5 to 8 million men in the event of another great war.

IV. *What the upkeep of the Entente Supervision Commission costs Germany.*

A bitter complaint pointing out that a private soldier on an Entente Commission in Germany is paid better than a German General.

V. *Franco-Polish friendship.*

Letter of New Years greeting to Poland from Generals Castelnau and Weygand are given in extenso. They are annotated with exclamations marks (not wholly perhaps without reason) where praise is given to Polish moderation, justice, devotion to hard work and love of peace.

21st January 1922.

I. *von Bethmann Hollweg's Book.*—By General Ludendorff. (conclusion).

The concluding chapter of the review consists, in the main, of complaints made by Ludendorff against the Chancellor for keeping O. H. L. in the dark regarding the suggestion made by Prince Sixtus to Count Czernin for a separate peace on the part of Austria Hungary.

II. *The crisis in the Italian army in October 1917.*—

The controversy is continued by General Krafft von Dellmensingen who was at 14th A.H.Q. and made special notes of all occurrences at the time. He says the original scheme between A. H. Q. and the German O. H. L. was merely to better the Austrian line which had become impossible after the first Isonzo battle. It then grew to a proposal to capture the

line Bergogna-Cividale-Plaviva, and to throw the Italians over the Tagliamento. Ludendorff, who in view of the serious situation in France had been very loth to lend a hand, wanted to have his troops sent back as soon as that task had been executed.

The more the 14th A. H.Q. studied the problem, however, the more clear it became, in view of the attrition of the Austrian man-power, that, to gain any solid advantage from the operation, the enemy must be pushed still further back to where the Austrian line could be considerably shortened. The 14th A. H. Q. took it for granted that O. H. L. would agree to this if there was a real success and therefore planned to cross the Tagliamento, action to be taken on the far side according to circumstances. A wheel to the South was by no means excluded from their thoughts.

A. H. Q. was at Krainburg on the 27th, but as forward communication proved difficult, it moved to Cividale on the 29th. Finding matters still enveloped in the fog of war von Dellmensingen obtained permission to push on to Udine. There he met General von Hofacker and discussed plans with him. There had been very little resistance; the 5th and 26th German divisions had got well ahead and von Hofacker wanted them to march to Latisana. Von Dellmensingen persuaded Hofacker to let him go back to see the C. in C., and the latter decided that the left wing of the army must march on Latisana while Hofacker's Corps moved to the bridges over the Tagliamento at and north of Codroipo.

III.—*The Island Empire in the Far East.*—by Arthur Dix. The writer says that, at the beginning of the Washington Conference, it looked very much as if America had conspired with England to make Japan appear as the disturber of the peace, much as France and England contrived to make Germany the scape-goat in this respect in 1914, and that Japan, with

great skill, managed to escape from that position and place the French therein; so much so that the latter had some difficulty in obtaining admission to the Four-Power pact.

Japan gained by the treaty a period for peaceful development. Her whole behaviour at the Conference should serve as a model for the Germans to copy; for, says the writer, we always have to make a great noise to get our people going in the right direction—and this was the cause of the failure of our pacifist policy in 1914.

IV. The war between the Bolsheviks and the Don Cossacks in the South of Russia, February 17th to March 20th.

Review of a book by Colonel von Dobrynin.

28th January 1922.

The 27th January. A historical reflection.—By Lieut.-General von Altrock.

A patriotic call to Germany to endure her troubles so that she may win her way through in the end.

“Thus the grand spirit of 1914, the spirit with which the Germans entered the world-war, and the fame and splendour of their arms shall remain with us. We owe it to the fallen heroes who died believing in our victory, and to the coming generation, to nurse this spirit so that it may wake again, grow and work wonders when the time comes.”

(Having just brought black ruin on a prosperous world we might have presumed the spirit to have had its fill of wonder-working.)

No leading article appears to be complete without the Irish fable. “Six centuries had the English enslaved the Irish, debased them by depriving them of every chance of education, destroyed their physique and decimated the population by carefully organised famines—just as they are treating the Germans to day. Although millions of Irish died etc.—”

**II. *The crisis in the Italian Army in October 1917.*—By
Genl. v. Dellmensingen.**

A continuation from a previous number of an article justifying Otto von Below's action in not swinging his left round to the south, making the point that the Austrians not only refused to allow the Germans to cross their front but threatened to attack them if they attempted it.

III. *The situation in the Far East.*—Deals with the struggles in the Far East between the Bolsheviks and White Russians and the quarrels of the latter among themselves, up to the end of 1921.

IV. *Preparation of the youth of France and Belgium for army service.*

Synchronizing with the shortening of the time of service a national scheme for the physical education of boys is being organised as a preparation for their military career. The writer agrees with the principle. "The child must learn that no one can deserve the title of a free man who cannot handle arms and is not prepared to shed his blood for his country."

4th February 1922.

Ludendorff and the diplomatists.

An article sent to the *Militär-Wochenblatt* from what is said to be a reliable source supporting Ludendorff's recent statements regarding the peace negotiations in the spring of 1917.

On the 16th March a conference took place in Vienna in which Count Czernin, the Chancellor, and von Wedel took part. On the 26th March Count Czernin came to Berlin and continued the discussion. He stated at both conference that France was putting out strong feelers for peace, not only with Austria but also with Germany. From what he said the Germans present understood either that a general peace was

being mooted or that France wanted a separate peace for herself with the Central Powers. Von Wedel in his account of a similar conference on the 13th May confirms this impression. It is very curious therefore that v. Bethmann-Hollweg should have spoken in his book only of a special peace with Austria.

II *Static warfare.*

An article showing that the war of trenches had a bad moral effect on troops and that it should never be undertaken except as a last resort. A loss of discipline is inevitable. N. C. Os. and men are thrown for such long hours together that force of character takes precedence of rank especially where there are private soldiers who by skill and energy have gained high places in civil life.

III. *Military and Political notes from Italy.*—July to Nov. 1921.

IV. *Technical Review.*

V. *Fighting formations of Infantry.*—By Captain v. Frankius.

This contains some useful notes on the handling of sub-units of infantry.

VI. *The Anthroposoph as Officer-hater.*

A complaint against Dr. Steiner who, in his paper—"The Hammer"—stated that officers of reactionary tendencies should be carefully watched and that those who are known to have treated enemy populations and prisoners of war badly by shooting, bludgeoning etc. should be reported to the Entente.

14th February 1922.

1. *The devastation wrought by us in France.*—By Genl. Ludendorff.

A strong protest against the charge that the General Staff carried out the systematic devastation of areas, houses and factories in France at the instigation of, and for the benefit

of German industries, It is stated that no more damage was done than was actually required by the hard necessity of war. Machinery had to be taken from factories near the line in order that it might be worked safely in rear. It was necessary to draw on the resources of the occupied area in order to provide the home land with food and raw material. The measures taken had to be all the sterner because of the harsh and illegal blockade by England. The demolition of villages was the fault far more of the Allies than of the Central Powers. The former employed an overpowering artillery for the purpose. (This is a little curious! Germany declares war on France and invades her territory. France endeavours to drive out the invader. The blame for any destruction done in this attempt lies clearly with the wicked Frenchman who, rather than damage his own property, should allow the invader to remain permanently in possession of his conquests.)

It is claimed that the devastation effected during the German retreat in the spring of 1917 was due to the normal need of clearing the field of fire in front of a fortress, the fortress in this case being the Hindenburg line and the foreground cleared extending, owing to the range of modern weapons up to 15 k. m. (The argument is somewhat weak. The foreground requires clearing up to some 2 k. m. for the benefit of rifle and machine-gun fire, but to clear a field of fire for long range guns is absurd, implying as it does that houses form a protection against heavy guns. And to state that even the sacrifice of the fruit trees was due to this particular need hardly accords with the facts, as many trees growing on walls were cut through near the roots and the walls left standing; and in other cases trees were left standing in the open with their stems half cut through. The writer is on safer ground when he claims that the wholesale clearance effected rendered it difficult for the enemy to collect large hostile forces for an attack in that area and therefore allowed the Germans to hold the line there with comparatively few troops.)

"Had we not executed these measures in front of the Hindenburg line we should not have lasted out the year 1917." (This is an interesting statement from so high an authority and shows the soundness of Sir Douglas Haig's view which he tried in vain to impress upon the French leaders—that, notwithstanding the failure of the Nivelle operations, the offensive should have been continuously maintained.)

II. *The employment of poisonous gas in war.*

The view is expressed that, in spite of any international agreements that may be concluded, gas will be among the weapons of future warfare. This opinion is supported by a number of extracts from English and American papers. Agreements, to be effective, must be supported by force. Where are the police? And who will fight for such a principle unless immediately affected? *Perfide Albion* will be the first to break faith. As Lord Fisher said "Where it is a matter of England's welfare, to hell with international treaties."

III. *Geography as a basis for World Politics.*

A favourable review of a book by Arthur Dix on Political Geography.

IV. *The new French Commander-in-Chief.*

The functions of Marshal Petain as Inspector General of the French Army in peace and as its Commander in war are given in detail, and attention is drawn to the vast powers conferred upon him.

V. *France is making tremendous preparations against England and America with the money she owes these two countries.*

A large heading with a few short notes in support of the assertion.

18th February 1922.

I. *The populations of the European states and the strengths of their respective armies.* By Lt. Genl. V. Altrock.

An interesting comparison in which the percentage of peace strength to head of population is given.

Except for Greece, which stands at a war, not at a peace figure, France heads the list with 2.19; and it is interesting to note that many other states with high percentages are grouped round Germany:—Poland 1.12, Tscheko-Slovakia 1.47, Belgium 1.49.

(Evidently in spite of the fact that Germany stands well at the bottom of the list with a percentage of only .17 unsupported by conscription, her neighbours are still not feeling quite safe. The events of 1914 are not easy to live down.)

II. *Geography of the Pacific after the Disarmament Conference.*

Deals with the general results of the decisions arrived at in Washington. Incidentally it is stated that a cry of rejoicing ran through the Japanese Empire when, owing to the dissolution of the Anglo-Japanese Alliance, the duty of Japan to hold India for England lapsed.

III. *The disintegration of the Russian Army in the World War.*

There is nothing new in this article. Stress is laid on the criminality of Gutschkoff in signing the notorious "Order No. 1". (But there is probably no one in Europe who realizes his mistake better than Gutschkoff himself.)

IV. *The mistakes of Poland.*

Extracts quoted with not unnatural gusto from an article on this subject by a Frenchman—a member of the Committee of the Society for the Preservation of the Rights of Man.

The Frenchman is not at all happy at the alliance of his country with Poland whose power he thinks is chimerical and exists only by grace of the present weakness of her neighbours.

25th February 1922.

I. *Washington and the U-Boat question.* By Admiral von Grapow.

The Washington Conference was mere bluff on the part of England and America to save themselves useless expense. The relation of power is not altered, but England will gain more than anyone commercially. Of course she will by the agreement have to allow America an equal sea-power but actually her supremacy of the ocean is not in danger.

The Conference nearly failed owing to the difficulty of reconciling the divergent views of England and France over the question of submarines, the former wanting them to be abolished altogether and the latter wanting a specially strong fleet of them. Agreement was reached at last by allowing Romans threatened by U-boats to have as many protective craft as they liked—cruisers, destroyers and torpedo boats. At the conclusion it was agreed to adopt the "Root Resolution" which settled how submarine warfare should be carried out in the future.

The Resolution, which can never be carried out in war, lays down that merchant ships can only be attacked when they have disobeyed the order to stop and that ships can only be sunk when the crew and passengers have been taken into safety.

The question was at once raised: What is a merchant ship? England by arming her merchant ships in 1913 and continuing to arm them throughout the war had rather spoilt the meaning of the word. But of course they were only armed for defence! Whether it be a case of ships or Governments there is always a difference of opinion as to who is the attacker and who is the defender.

For example, when an armed merchantman is called to halt by a sub-marine it treats the case as an attack and opens fire with its "defence" guns in which it would be normally superior to its opponent. The English Government can hardly insist on the victorious sub-marine taking crews of sinking

ships on board considering in how many well known cases in the war she allowed them to drown in calm seas without being able to plead tactical necessity.

4th March 1922.

I. Ludendorff's picture of himself.

A review of a pamphlet by Hans Delbruck of this title.

It is one continuous charge against Ludendorff both as general and politician. Two great men had built Germany, Bismarck and Moltke; two others had destroyed it, Tirpitz and Ludendorff. So Delbruck tries to destroy in the eyes of German people their idol, Ludendorff, and he does it in a mean unworthy fashion.

No one wants to defend Ludendorff as a politician nor does one hold him blameless as a general. His fame would be greater too had he written less and later. Delbruck however condemns him wholly.

Ludendorff's personality stood out among the greatest in the World War. Delbruck prefers Foch, who had, however, a much easier task to perform.

It is absurd to make Ludendorff responsible for the original war-plan. He did not even know von Schlieffen's memorial. And it is unworthy to minimise his share in Tannenberg, to pretend that the greater honour lay with Otto von Below for putting in the whole of the XVIIth Corps; and that in any case the victory had been all worked in peace. Delbruck is also very much down on the plan for the 1918 offensive.

It is no portrait of Ludendorff by himself that is drawn in the pamphlet; it is a portrait by Delbruck that does not redound to the credit of the Professor.

II. Poland and the Baltic States. (October to December 1921.)

Mainly a description of military and political conditions in Poland with a few remarks on Finland, Esthonia, Lettland and Lithuania.

III. *Military and political reports from Switzerland.*

Switzerland is suffering heavily from the high value of her franc. The iron, watch and textile industries are in a bad way. Agriculture and the milk and cheese trades have fallen on hard times. Unemployment is rife. German trade is making strong headway in spite of tariff walls. The army is doing particularly well; both officers and men are exceedingly keen and they are enjoying the privilege of hearing a good many lectures from German officers on the war in spite of hints from France that such conduct is not quite proper.

The Swiss have a poor opinion of the League of Nations, and with France they are far from pleased on account of her stubbornness over the Geneva zone agreement.

VI. *The French troops in Morocco.*

V. *New methods of Infantry training.* By Capt. v. Franzius.

The German methods stood the test of war admirably. The forms and the details gradually disappeared and only objects remained: the offensive spirit and discipline. By other and new methods we shall now strive towards the same ends.

No longer shall we surge forwards in waves encouraging each other with loud hurrahs. The offensive spirit in the mass must be replaced by the offensive spirit of the individual or the small sub-unit. A platoon, a section, every man a hero, pushes forward when it can, rests itself in cover as near as possible to the enemy's line and helps forward the others.

The new methods entail very thorough training of the individual, not only in the wish to attack and in the methods of attack, but also in discipline, largely self-discipline. Often out by himself, only self-discipline will drive him forward. There is no better school for this self-discipline than sport.

11th March 1922.**I. *The defenceless state of Germany.***

Reference is made to a table in the previous number which gave percentages of peace strength of armies to head of population and showed Germany at. 17 against France at 2. 19. The argument of Germany's comparative weakness is further strengthened here by a picture said to be taken from the 'Scientific American' showing graphically by means of guns of ancient design and of different sizes the number of guns possessed by the armies of the great Powers. The French gun is enormous—the German gun a mere pin-point.

II. *The military and political world situation.* By Lucius Cincinnatus.

The writer deals largely with the introduction of the one-year system into the the French army and its probable effects. He then notes that England is at last realizing that the Treaty of Versailles is gradually destroying the rest of the world for the benefit of France. Glad emphasis is laid on English difficulties in Egypt and India and the danger in which she stands from the long-range guns, sub-marines and aircraft of France. Then follow some notes on the American and Japanese armies

III. *Anniversaries.*

There are many great anniversaries in German history—the days of Rossbach, Konigratz and Sedan for example—but there are none relating to the great war, because battles for the most part lasted weeks and months. It is suggested that the Society of ex-officers would find for themselves a useful work in fixing dates to be held in remembrance, as the crises of great battles.

18th March 1922.**I.—*Soviet-Russia. November 1921 to January 1922.***

The demobilization of the Russian army is in progress. About one and a half million is the present strength, including the Navy and the Police, of which about 800,000 are combatants.

The organisation of the army is becoming more like that of Monarchic days and quite one third of the officers are officers of the Tzarist regime and they are doing good work. Supplies, quarters and clothing are still very bad.

Endeavours are being made to raise the "esprit-de-corps" by giving units local designations.

The Red Staff College has just produced its first batch of graduates, about 70 of them, after a three years course.

The first big manœuvres of the Bolshevik army have just taken place—24 battalions, 6 squadrons and 6 batteries on each side. Trotzki regarded them as successful, but there were a good many failures in details particularly in the supply services.

Politically there is a slow but steady trend to the right. Some endeavour is being made to increase production, encourage trade and to improve the financial position.

II.—*Form and Will. by Julius Frontinus.*

During the war many battles were fought out in fashion far other than that conceived by the leaders; and the junior Commanders were quite content to let the leaders think that all had gone according to plan. Here lies a great danger for the historian. Far behind the front the relations of cause and effect were anything but clear. For instance the apparent success of the elastic defence was often due to an excessive desire for safety on the part of overwrought troops. The elastic defence was by no means wholly sound. It so often led to elastic morale.

Reviews.

The book is written by a very important person in the history of the world. It is a very interesting book. The author is a very famous person. The book is written in a very simple and easy to understand language. The book is written in a very interesting and entertaining way. The book is written in a very simple and easy to understand language. The book is written in a very interesting and entertaining way. The book is written in a very simple and easy to understand language. The book is written in a very interesting and entertaining way.

The book is written by a very important person in the history of the world. It is a very interesting book. The author is a very famous person. The book is written in a very simple and easy to understand language. The book is written in a very interesting and entertaining way. The book is written in a very simple and easy to understand language. The book is written in a very interesting and entertaining way. The book is written in a very simple and easy to understand language. The book is written in a very interesting and entertaining way.

23rd March 1922.

The book is written by a very important person in the history of the world. It is a very interesting book. The author is a very famous person. The book is written in a very simple and easy to understand language. The book is written in a very interesting and entertaining way. The book is written in a very simple and easy to understand language. The book is written in a very interesting and entertaining way. The book is written in a very simple and easy to understand language. The book is written in a very interesting and entertaining way. The book is written in a very simple and easy to understand language. The book is written in a very interesting and entertaining way.

II. *Ludendorff's picture of himself*". By General von Kuhl.

"Ludendorff's Selbstporträt" is the title of a pamphlet written by Professor Delbrück which von Kuhl characterises as a gross personal attack on one of Germany's greatest men. According to Delbrück, Tirpitz and Ludendorff between them destroyed Germany. The former was all out for a decisive victory so that he might dictate the terms of peace, whereas if he had only worked for a return to the *status quo ante bellum* he would have gained his end. Von Kuhl points out that Ludendorff fully recognised that a decisive victory was unlikely. The way to gain the best terms of peace was not, however, by the halfhearted measures suggested by Delbrück, but by putting all available force into battle and creating an impression of strength.

It is absurd to blame Ludendorff for the defeat of the Marne. The defeat there was due to failure on the part of the Chief of the Staff to follow the Schlieffen plan in principle—i. e. to keep the right flank strong at the expense of the left.

Only in the spring of 1918 were the Germans able to take the offensive again. Delbrück affirms that the offensive had no chance. The admissions made both by the French and English prove him to be wrong. The Professor states the attack to have been made neither at full strength nor at the right place. He would have preferred a partial attack in Italy, with all of which views von Kuhl deals trenchantly.

III. *The soldier's load*. Everyone is agreed that the soldier carries too much now on his person, but everyone has a different notion as to what articles may be dispensed with.

IV. *Letévre stimulates rage against Germany*.

Refers to a recent speech made by the ex-war minister in the Chamber in which he charges Germany with continuing her preparations for war.

The writer considers that calumnies of this kind are uttered solely for the purpose of finding justification for the present military lunacy in France.

1st April 1922.

I. *Historical reflections of Bismarck's day.*—By Gen. von Altrock.

"When we look back on Bismarck's day to seek a way out of our complicated situation, we ask ourselves, "On what foundation did the Iron Chancellor build, how can we build on the destroyed foundations, and what does the future hold for us?" We must certainly take stock of the past if we are to find our way in the future."

Generally speaking the article is full of praise of Bismarck, Prussia and the Hohenzollerns—full of complaints about the present state of Germany. It contains a call to unity as only by a united front can strength be shown.

II. "*The situation in the Far East*".

Deals mainly with questions of minor importance between the Bolsheviki and White Russians.

III. "*A new radical military expert.*"

Trounces one Hermann Schutzingger who poses as the military expert on the staff of the "Socialist Monthly Magazine."

8th April 1922.

I. "*On intelligence and free mental development in the Reichswehr*".—By Capt. Pregers.

II. "*Military and Political matters in Sweden.*"

An article dealing mainly with the present military weakness of Sweden and the disastrous effect that weakness is ex-

exercising on her foreign policy. Since 1921 the army and navy have been under the Ministry of Defence at the head of which, curiously enough, is a minister who owes his place to his anti-militarist activities.

Both army and navy are in a bad way and terms of service are very short.

III. "*The national defence forces of Bulgaria.*"

A digest of an article in a Bulgarian magazine. The Bulgarian never wants to fight and has no great sense of duty towards his country. The greater part of the population regarded an alliance with the Central Powers as unsound and had therefore but little enthusiasm for the war. The breakthrough was successful because the army was demoralised. The examination to be made into the causes of the disaster for some unknown reason never took place. The Bulgarian is ambitious and jealous and has but little confidence in others. An outstanding personality is therefore rare either among politicians or among soldiers. In war-reports the writer will always place himself and his men in the forefront and describe the deeds of no one else. Superior officers have but little regard for their subordinates and hence mutinies are not uncommon. War ministers have followed no guiding principles in their actions. One disbanded 24 Reserve regiments, another arranged for the army to be staffed in war by foreign officers, a third cancelled the arrangements for a Staff College and so on. It is not surprising that a good deal was wanting on mobilization. Finally the writer says he would much prefer a conscript national army to the existing voluntary army.

IV. "*The situation in the autumn 1918.*"

Reviews a reply by General von Kuhl to a pamphlet by Dr. Adolf Koster entitled, "Could we have fought on in Autumn 1918", in which the answer to the question is in the negative.

Von Kuhl says that war weariness in the home land and the disorganisation of the railways made it very difficult to carry on the war, and that the O. H. L. had come to the conclusion that the war was lost as far back as 14th August 1918. The only object of further resistance was therefore to prevent a complete breakdown and to obtain terms not wholly unfavourable. The spirit of the troops at the front was still good enough for this but it must be admitted that the young drafts coming up to the front were of the poorest quality. (This is interesting as our young drafts of the same period were of the finest quality.)

15th April 1922.

I. General von Falkenhayn by General von Kuhl.

One of the outstanding generals of the world-war Falkenhayn took up the reins in September 1914 at the moment when the Schlieffen plan on which the General Staff had based their hopes had failed. What was he to do? He could not tell at the time that position warfare would shackle the German army and prevent in from ever using its best power in the open. Nor could he see how the blockade would steadily sap the German strength.

His method of solving these problems has been much discussed. He was no more entirely for the wearing-down process than Ludendorff was entirely for the destruction process. Both were practical soldiers and acted not according to a system but according to the situation. It was in their ideas of what could be done with the means available that the main difference between the the two men lay.

On the other side there were similar differences. Petain wanted to work cautiously even late in 1918. Foch wanted to sieze the initiative and to hold it.

Falkenhayn gradually came to the conclusion that a decision could not be reached by crushing all his opponents but only by hammering away at them till they should feel no

longer able to pay the price for conquering Germany. He held the best plan to be the conservation of his resources and a refusal to take any action that might ruin his staying power. In this he was obeying what he believed to be the law of necessity and was not following his own inclination. History will decide how far he was right.

The kernel of Falkenhayn's strategy was his renunciation of a decision in the East. Without this a decision could not be sought in the West. He also declined to accept von Hotzendorff's suggestion of an attack on the Italians in 1916. Finally he decided for an attack with limited objective on Verdun. Although this was not successful our enemies have all recognized the correctness of the move and how nearly Verdun was to capture.

Falkenhayn was replaced in August 1916 by Hindenburg and Ludendorff. Courad's offensive in Italy had just failed, there had been a defeat in Russia and Rumania had entered the struggle so it was not unnatural that the people at such a moment should have called for the heroes of the East. Falkenhayn went to command the 9th Army in Rumania where he rendered brilliant service.

We are too near great events to judge soundly, but one thing is certain—Falkenhayn's name will always be highly honoured; and however we may quarrel over details of his work he was certainly a great leader in a great period.

II. *The obligations of the profession of arms in the German army.*

Instructions issued by the President and by the Minister of Defence on the duty of the German soldier to act honourably, courageously and loyally to his country and his comrades.

III. *How Russia set the world ablaze.*

General Döbrorolski was Chief of the mobilization branch of the Russian General Staff in 1914. Late in 1921 he wrote an

Reviews.

article in a Russian paper on the subject of the Russian mobilization in 1914. The Russian General Staff was quite clear that a general mobilization would mean a world-war and yet they and the principal ministers preferred a general to a partial mobilization because of the many troubles the latter would entail and because they felt that a general mobilization was certain to be necessary in the end. The signature of the Czar to the latter was obtained on the 29th July though proclamation of the mobilization was for various reasons delayed. The 30th August was given as the first day of mobilization but the Czar changed his mind and ordered a partial mobilization on the evening of the 29th. However President Sazonof at the instance of Yanushevich finally persuaded the Czar on the 30th to issue the order for a general mobilization. Austria only issued her order of the same nature 18 hours later and Germany 24 hours later still.

IV. The Emperor Charles.

The Emperor Francis Joseph was an honourable and respected ruler but not equal to his heavy task in these difficult times. There were great hopes that his nephew would fill the high office with greater success. Unfortunately the Emperor Charles succumbed to the influences of his wife who had strong French sympathies and failed to maintain the alliance.

22nd April 1922.

I. The Great War 1914-18.

This is a review by Freytag-Loringhoven of the first two volumes of a monument work on the great war edited by that most industrious of editors, Lieut. Gen. Schwarte. The book should be of great value as the editor has been at great pains to obtain writers to deal with the various subjects and periods who had special experience of them during the war.

II. *Neutral contributions to the study of the battle of the Marne.*

Dr. Eugen Bircher, a Swiss officer, is writing on the battle of the Marne and his first volume, "The battle of the Ourcq" has just appeared dealing with the period 5th to 12th September 1914. It receives very high praise from the German reviewer.

— — —

III. *The national forces of Lithuania.*

An article by Commandant d'Etchegonn in "La France Militaire" gives the number of Lithuanians who served in the Russian army in the great war as 742,000, of whom 200,000 were killed or wounded. Lithuania has made great progress since. She has introduced conscription. All men of 20 years old except the supporters of families are taken. After a service of 2 or 3 years, according to Corps, they go to the first reserve till they reach the age of 32 and then to the second reserve till 45. The army will have a peace strength of 40,000 and a war strength of 200,000. The infantry is armed with the Mauser, the artillery with all sorts of weapons, French, English, German, Russian, some taken from the Bolsheviks some from Bermot. Most of the older officers were in the Russian Imperial army and the education of those now joining is very thorough,—a two years course after spending three months in the ranks, and before promotion to any rank, even to that of General, he has to go through a further course. There is also a Staff College of the normal type and selected officers are sent to the French schools at St. Cyr and Fontainebleau. The main point is that Lithuania can place in the field 200,000 brave well-disciplined well-led men. It may be mentioned that 15,000 Lithuanian volunteers who came from America were killed in France. The Militar Wochenblatt thinks that the French writer places the state of the Lithuanian forces in too rosy a light.

IV. *German disarmament.*

A tabular statement of the progress made in German disarmament, according to which 5,855,979 rifles out of a total of 5,879,256, the whole total of 54,415 guns and 425 million out of 468 million rounds of S. A. A. have been destroyed.

29th April 1922.

I. *The crisis in the Italian Army in October 1917.*—by Col. von Pohl. The discussion on the above subject is continued again on the Austrian side. The extent of the success and the ease with which it was gained surprised everybody and made organization of the advance difficult. The difficulty was enhanced by the fact that 5 out of the 7 German divisions were to be withdrawn as soon as the TAGLIAMENTO was reached. The German 14th Army was inclined to act independently and got out of touch with the Austrian command. As to the suggestion that the Austrians were ordered to attack the Germans if they swung to the left across the Austrian front there was not a word of truth in it.

II. *Technical review.*—by Captain Polster. This deals with a number of subjects—cartridge cases and cartridges for small arms, the Delamare-Maze patent gun, some successful experiments in dowsing the flash of a gun by the use of oxalate of potassium, the destruction of wire and the anchoring of airships—but all somewhat superficially.

III. *The French Air Service.*—An Extract from the Times which in turn dealt with an article in Le Matin on the present unsatisfactory organization of the military air service in France due to the fact that the higher offices are filled by officers without experience in this work.

IV. *The Red Army.*—by Major Saring. The reorganization of the Red Army may now be regarded as settled. At present

the strength is about 1,600,000 including naval and police troops. There is a wave of keenness on officers courses—no one escapes them, not even Brigade Commanders; and some of them last as long as 3 years. Trotzky is Commander-in-Chief. His Chief of the Staff is Skljansky, and Rykow, Stalin and Smilga are deputies.

— — — — —
V. *Morocco*.—Quotes an article from "France Militaire" in which advice is given to Spain not to allow herself to be taken in tow by England in Morocco but to form a Mediterranean Entente with the French, for the latter thoroughly understand how to deal with Islam as was shown by their treaty with the Kemalists. The Militar Wochenblatt suspects the French to have helped the Moroccans in their campaign and thinks they would gladly see the Spaniards turned out of the country.

— — — — —
VI. *Argentine criticism on General Mangin*—General Mangin after a short visit to South America made a speech in Paris in which he cast some aspersions on the Argentine army and said it ought to follow the French model and send officers to French schools. These statements have called forth a bitter protest from an Argentine general who has a strong hankering after German methods.

— — — — —
VII. *The driving regulations of 14-3-1922*.—Driving regulations have been issued for the first time with the object of profiting by war experience and of making the exiguous supply of horses go as far as possible. During the war horses were driven mainly from the box and not from the saddle. This custom should be continued as it is economical but it needs great care in harnessing and matching of horses and some skill in driving.

— — — — —
VIII. *The battle of the Marne*.—The swiss officer, Dr. Bircher, delivered a lecture in Berlin on the battle of the Marne in which he stated that the Germans had practically won the battle and had only to reap the fruits of victory when Headquarters 2nd Army lost their nerves and ordered the retreat.

6th May 1922.

I. *The military and political situation in Great Britain.*—by Lieutenant-General Balck. The present position of Great Britain is very much worse than it was at the end of the Napoleonic wars. England is war weary and, in spite of her entente with America, is very shy of quarelling with France over the Near Eastern question. The reason of this decadence is the departure of Lloyd George from England's old policy of maintaining the balance of power in Europe. So long as the German army existed France was bound to pay attention to England, and Lloyd George got accustomed to this and expected it. But as soon as the German army disappeared, France became completely independent.

The economic position of England with regard to the European states is even worse than her military position. Germany, Russia and S. Eastern Europe are no longer her customers. Germany with her low exchange is ousting England out of all these markets. England has not profited by her trade agreement with Russia. On the contrary Lenin has openly declared his intention of ruining England by raising India, Ireland and Egypt against her.

The Entente Cordiale no longer exists. The growing French danger is becoming felt in England. The treaties of France with Belgium and the Turks are both directed to some extent against England. The situation in India is causing a growing anxiety, there is trouble in Afghanistan, Egypt and Ireland.

II. *The decision to retreat from the Marne.*—by Lieutenant-Colonel Muller Lœbnitz. A long and seemingly unnecessary discussion as to who was responsible in the 2nd Army for giving the order to retreat. Von Bulow must of course bear the responsibility.

III. *The crisis in the Italian army, October 1917.*—This long drawn controversy is concluded by remarks from von Below von Willisen and from the editor of the *Militar Wochenblatt*.

IV. *Læso et invicto militi.*—Prior to 1914 it was impossible to fill all the houses that had been built for soldiers wounded in the wars. Now such houses could be filled a hundred times over. One would expect anyhow to find them filled with soldiers. Actually this is not the case. The quarters are taken up to a great extent by minor officials who find therein a convenient lodging—an arrangement that hardly reflects credit on the nation.

13th May 1922.

I. *Survey of the military and political conditions in the Pacific* by Professor Karl Haushofer, Major General, retired list. Deals with the civil war in China, the fighting between Bolsheviks and Japanese, and with the soothing effect which the Washington treaty has had elsewhere in the Pacific.

II. *Asago or Verdun.*—A long article by von Cramen, who was German representative at Austrian Army Headquarters during the war. Conrad wanted the main attack in 1916 to be made against the Italians for he believed that with German assistance he could destroy the Italian army utterly and that the destruction of Italy might have a decisive effect. Falkenhayn thought differently and prepared an attack at Verdun. He and Conrad were constantly quarrelling. The one thought the Germans ought to control operations completely; the other held out for independent work on the part of Austria and was very jealous of her prestige. Von Cramen thinks the fact

that no arrangements had been made by the Central Powers before the war with regard to the control of operations is a clear proof that Germany had no intention of going to war. (On the other hand, if Austria-Hungary, under the stress of war, and of repeated disaster, refused, in spite of many displays of incompetence on the part of her generals, to accept German leadership, is it likely that she would have accepted it in peace?)

III. *Allowances to War invalids.*

IV. *The restoration of railways in the western theatre of war.*—A review by Lieutenant Koppen of a book with this title by Major Kretzschmann dealing with the repair of French and Belgium railways by the Germans during the war.

V. *Council of war in Warsaw and signs of a coming storm.*—A conference was recently held in Warsaw which closely resembled a council of war to consider the question of measures for protection of the frontiers. War is expected to break out after the Genoa conference is over, most probably on the Bolshevik border, and in that case the alleged secret clauses in the Russo-German treaty may be expected to bring Germany in too. Mobilization measures are being taken. All this excitement is largely due to the loud rattling of the sabre now taking place in the French press. The two countries France and Poland are playing into each others hands.

VI. *Notes on fleets and armies.*—Germany complains bitterly that the cost of the army of occupation and of the various foreign commissions is nearly double that of her combined army and navy.

Revue Militaire Suisse.*(September to December 1921).*

(NOTE.—All names are spelt according to the French text.)

The principal interest in the present numbers lies in a series of articles on the Greco-Turk war in Anatolia, by the well-known military writer Colonel F. Feyler. The author has been serving with the Greek forces and his facts and deductions, although quite unbiassed, are naturally based on data provided from Greek sources. So little has appeared in the papers regarding this campaign that this brief connected narrative by an impartial authority is of considerable interest.

Colonel Feyler maintains that a study of the campaign produces valuable lessons both from political and strategic points of view. With the political standpoint we are not immediately concerned and it is only proposed here to consider briefly the strategic and tactical aspects.

It is first necessary to realise that in the area in which operations took place the population is by no means homogeneous and that, owing to their lack of cohesion, and to the existence of a considerable body of friendly inhabitants, the Greeks were able to defend their communications with much smaller forces than would have been necessary in an entirely hostile area.

He divides the operations into three phases:—

(1.) Campaign of 1920, undertaken, amongst other reasons, to assist the British in the neighbourhood of Constantinople, as the latter were considered to be in danger of being driven into the Black Sea. At this period the Kemalists were very indifferently organised and Mr. Venezelos quite expected to finish the campaign without extraneous assistance. This first phase led to the occupation of Western Asia Minor by the Greek troops, who secured control of the country crossed by the Smyrna-Panderma railway, the southern area served by the Smyrna-Afium Karahissar railway and (in conjunction with

the British) of the southern shore of the Sea of Marmora, the Dardanelles and Ismid.

(2). The second phase began in the spring of 1921, where the first phase had ended. The Greek staff, misled by the ease with which they had achieved their initial success, expected to knock out the Kemalist bands, even if they had meanwhile been reinforced. At this time the Greek forces were disposed in two groups:—

- (a) 3 Divisions in the south based on the Smyrna-Afium Karahissar railway, and
- (b) About 4 Divisions in the north based on the Ismid-Eski Cherh railway.

Between these two groups was a gap of 120 miles. This initial strategic error resulted in the abortive attack at Eski Chehr, in spite of the vigour of the Greek attack, and the the most heavily engaged of the northern divisions lost 50 per cent in casualties, while the southern group which had advanced 60 miles east of Afium Karahissar was equally unsuccessful and nearly had its retreat cut off by the Kemalists, who were able to take advantage of their central position.

This lack of success caused a revulsion of public feeling in favour of the Turks amongst the western Powers who had not expected this set-back, and pressure was brought to bear on the Greeks to induce them to give up their gains. The Greeks were however unwilling to give up Smyrna and in the ensuing operations they found themselves isolated and forced to fight the Kemalists unsupported.

The Greek staff thereupon took fresh stock of the situation and, faced by the difficulty of transferring troops from one group to another, (a matter of 45 days journey) and of concealing the process from the Turks, came to the conclusion that as the northern group was too strong for a merely holding attack, it would be best to utilise the march southwards of this group as the left column of a combined advance designed

to effect the cooperation of both groups. The northern column was therefore ordered to march from north to south towards the Turkish centre about Kutakia, while a small mixed detachment from Ouchak moved from the Southern group northwards to gain touch with it and fill the gap between the two groups. Meanwhile the remainder of the southern group, disposed in two columns were to march:—

- (1) North East between Afium Karahissar and Kutakia,
- (2) east on Afium, which was to be turned from the south.

There were thus to be four columns, making a concentric movement, starting from an arc 120 miles long, and designed to effect their junction opposite the enemy's right and centre on a front of 80 miles.

Considering that this final concentration of all four columns could only produce 90,000 combatants, the risks run are obvious.

It was, however, considered that although the Turks could be expected to put up a stubborn defence in prepared positions or even to indulge in local counter-attacks to restore unfavourable situations, yet his poor organisation and lack of transport precluded any counter-offensive by them on a large scale. The result proved the correctness of this appreciation, as the marches of the different columns took place unmolested and their concentration in face of the enemy was effected as intended.

The Turks, finding their position in danger of envelopment, withdrew without serious loss, so although the Greeks had been successful in manœuvring the Turks out of their positions, they failed to inflict appreciable losses either of personnel or material on their enemy.

This phase may be considered as ending on 22nd July 1921.

(3). The next and decisive phase took place between the 14th August and 13th September and consisted of four periods:—

Reviews.

- (a) A strategic movement towards the east from Eski Chehr to Sangarios.
- (b) A seven days battle east of Sangarios.
- (c) After the battle a manœuvring phase lasting ten days and
- (d) The retreat of the Greek army to the line of the Sangarios.

The principal interest in these operations lies in the way the Greeks advanced into the salient formed by the loop in the Sangarios river, behind which was the Turkish position, and then, leaving one division as a screen on a broad front, moved the remaining eight divisions of their army southwards over the southern branch of the Sangarios in an attempt to turn the Turkish left.

The Turks, however, acting on interior lines, were able to reinforce their left and in the seven days battle which ensued, the Greeks found themselves unable to progress on their right. They then tried to advance by their left, but the Turks put up a strong defence and eventually the Greeks had to give up the attack and retire behind the Sangarios river.

This meant a confession of the failure of the campaign, and ended the Greek attempt to reach Angora.

REVUE MILITAIRE SUISSE.

January 1922.

"Less attaques en vitesse pendant la grande guerre et l'après-guerre."

In this, the last article of the series, the author deals with the tactics of arms and weapons during the post-war wars since 1918 compared with those of the years 1914-1918.

He gives various incidents showing that the mounted arm, although discredited on the Western front has once again demonstrated its great utility and importance. Recent campaigns have, he considers, shown that tanks are by no

means weapons of universal application, capable of dwarfing all the older ones. Armoured cars however like aircraft can be of practically universal usefulness. He comments on the reappearance of armoured trains for rail defence in the more spacious theatres of war of the moving type.

Hasty field defences have once more become important since they are now hardly ever exposed to heavy artillery. The rifle he shows as once more coming to the fore as *the* weapon, and attributes its temporary eclipse during the great war to the lack of training noticeable in all the armies as time went on. He cites an incident of recent date in the middle East where two marksmen inflicted 37 casualties on an enemy detachment attempting to cross a river hereby frustrating the effort at that point. The rifle grenade is a good handmaiden to the rifle.

In conclusion he holds that though the increased fire power of modern weapons was at first favourable to the defence, it is now helpful to the offensive provided that attacks are made swiftly. The article concludes by saying that the finest image of victory handed down to us by the ancients is a *winged* figure.

"A la recherche d'une nouvelle discipline".

A comparison between school and army discipline with mention of the Montessori system. The author considers that existent military discipline is somewhat out of date and in this opening article makes some rather telling remarks about guard duties.

February 1922.

"Quelques remarques interessant la preparation a la guerre et la mise en oeuvre de la batterie et du groupe."

A rather technical article dealing with the organisation of artillery units, particularly field artillery. The author bases his conclusion on the experiences of the war, and deals with

alterations of personnel and material which he considers are requisite for artillery fire to produce its maximum results.

" A la recherche d'une nouvelle discipline."

The author continues to develop the attack on guard duties which he opened in the January number. The Swiss regulations he deals with seem to be twin brethren of our own. He stigmatises them as archaic and useless, a source of infinite trouble to those who have to carry them out and detrimental to the task supposed to be performed by guards, *viz* guarding something or somebody.

He analyses the regulations comparing them with those dealing with outposts and guard duties in the field which are far more sensible.

Finally he suggests that the whole business of guards might be simplified and rendered far more efficient as well as far less irksome by taking a leaf out of the book of the police, who really do guard things and people.

March 1922.

" A la recherche d'une nouvelle discipline " (last part),

The author continuing his theme points out that the whole tendency of modern civilisation is towards the equality of man and a spirit of brotherly love, all education both secular and religious being directed towards this aim.

Consequently when men are taken into the army all their military training is a direct contradiction to their previous upbringing and the question arises how are we to turn them to a new aspect.

Three methods are in vogue (i) Drill including fear (ii) Appeals to national and individual sense of honour, (iii) Display. All three are useful at different times and in different places.

Drill he describes as the training of the animal part of man, comparable to training of animals *i. e.*, the production of given reactions to certain exterior stimuli. He marks the distinct differences between the reactions produced in a drilled mass by a man accustomed to handle others, and those produced on a crowd by the rare individuals possessed of real magnetic powers over their fellows.

From this he argues the necessity of keeping the officer apart from the man, and contends that the more democratic is the state the more essential is it that the leader live apart from his men. But he considers there is a tendency to overdo the distinction as regards guards, salutes and so on.

Shows and displays are good and it is necessary some times to show off troops to the civil population, but he thinks that military sports and manœuvres would be a better way than meaningless ceremonial parades.

Punishments he still considers necessary and cites the Bolsheviks, the leading exponents of the equality of man as having the strictest punishments of any army. The death sentence is indispensable in war since in war your whole object is to awake your men's primitive passions and you must consequently have primitive means to restrain them.

He compares the state of a party of boy scouts after 15 days in camp and a party of recruits after 15 days barrack training considering that the former will be nearer to being really useful soldiers. For the future he thinks military training will consist less of drill, punishments, talk of national honour etc., and more of training on sport lines like football and other games and advocates military competitions in military work on the lines of games tournaments.

"Quelques remarques interessant la preparation a la guerre et la mise en oeuvre de la batterie et du groupe (last instalment).

A continuation of the examination of the lessons for artillery from the last war. The eternal question of how to fight. The author lays stress on the necessity for due proportion of both thought and action. Tendency to imitate either Sancho Panz or Don Quixote instead of maintaining the happy mean. He describes the *raison d'être* of artillery as being the preparation for the infantry action either in attack or defence and insists on the consequent necessity for close liaison between the two arms, laying stress on the difficulty of this problem when things begin to move.

In his opinion the baloon and the aeroplane are the best means of communication between the two arms during the height of the action.

Passing to the enhanced role in modern war of mobile heavy artillery he points out that war of its essence should be rapid and that consequently heavy artillery to give its full value must be rendered as mobile as possible. The slowness of the late war he attributes to the fact that "the allies were learning the art of war as they fought and the dragged out struggle was due to their initial poor work".

He considers that heavy artillery should form an integral part of the division in order to help liaison and camaraderie between the arms.

In conclusion he touches upon the flow of supplies and the necessity for regulating this by divisional "depots" Otherwise there is a tendency for troops to be short for long periods and then suddenly to be snowed under by the arrival of months' demands at once for which they have no transport and so waste.

" Du recours aux armes "

An interesting article on the question of duties in aid of the civil power.

The occasion referred to was at Bale in July 1919 when the dye workers proclaimed a general strike with the usual attendant socialist demonstrations.

The civil authorities authorised the police to call on the military and the Government ordered certain units to Bale. Pending their arrival a company was withdrawn from the frontier. The O. C. Coy. had carefully explained to his men their duties while in aid of the civil power.

On the morning of the 1st August a mass demonstration took place and the troops were stoned. They fired wounding a striker who died directly on reaching hospital. The body was carried in procession with red flag and the procession tried to enter the barrack square. On the crowds refusal to obey the sentry's order to halt, they were fired on and a woman in the mob was killed.

Her mother laid a claim against the Government but the Court refused to admit the suit as the troops had in no way exceeded their duty since they only fired:—

(i) On being assaulted *i. e.*, stoned,

(ii) On their legal orders being disobeyed *i. e.*, the crowd ignoring the sentry's order to halt.

The Courts further ruled that even if it were desirable to grant compensation in certain cases, it would not be feasible to make Government pay. The soldiers firing are the state defending itself against aggression, defending the whole community against a turbulent portion of it. If it were feasible to collect damages they should be collected from those who stirred up the disturbance not from those who properly repressed it.

This decision coming from such a very democratic country as Switzerland is of distinct interest to all soldiers, more particularly perhaps in this country.

Journals and Magazines.

I. The "Round Table" in its March number is unusually interesting. There is the normal thinly veiled worship of Lloyd George and open detestation of French policy. The treaty made by the French with the Kemalists is put down as a bid

for popularity with her Moslem subjects from whom she hopes to draw at least one third of the army on which alone she can hope to maintain the hegemony of Europe.

The outbreak of war is credited to the relentless time tables of the General Staffs. Austria orders a partial mobilization to show that she means business in the matter of the ultimatum; the Russian General Staff point out to the Czar the huge advantage Austria will obtain by a start and obtain permission likewise for a preliminary mobilization then follows excitement in Berlin whose schemes for success in a great war depend on rapid victory against France while Russia is slowly developing her power; and so on. Everyone anxious lest "Time", that factor, "more valuable in war than gold or men" should be on the side of the enemy. The "Letters from an Englishman in Germany" give a good picture of internal conditions there: bustling life, apparent prosperity, Bolshevism dead, hopes of a future in Russia; but, on the other hand, wild speculation, upset of social values, absence of all that industry and thrift on which the old Germany depended, fear of war and yet, with the attitude of France, the belief that it is inevitable.

"The Near East" deals clearly with the Turkish problem and shows all the cards now to be in the hands of the Kemalists.

"The Indian problem in East Africa" is well presented but in a fashion that for a Round Table article may almost be classed as reactionary.

There are two striking articles in the American "Review of Reviews" for March 1922. "What was gained at Washington", by Frank H. Simonds and "Shaping our new American Army", by John W. Weeks, Secretary of War. In the first the real gains are clearly indicated but a warning note is struck against a belief that conferences such as that under discussion are going to compose all international differences. It is made clear that at Washington there was a meeting of friends, ready rather to accommodate one another than to cut throats. Vast

building programmes could only be ruinous,—why have them? Anyhow capital ships are of doubtful value; let us scrap them. But, referring back to pre-war conditions, would England and Germany have conferred peacefully on naval limitations or France and Germany on reduction of armaments when discussing Alsace-Lorraine? At the conference accord was shattered over the submarine question because France and England had not adjusted their differences before the conference. Great Britain wants to spare Germany because of her vast unemployment. Her existence depends on the reestablishment of normal trade relations in Europe. France, on the other hand, has very little unemployment, is comparatively speaking self-supporting and has but few exports. What she wants is freedom from a military menace on her frontiers. For her this can only be attained by the maintenance of a strong army or by a system of alliances. Great Britain must be a definite ally—not for 10 years, a period in which Germany is likely to recover—but for 30 years. If this matter had been satisfactorily settled before the conference there would have been no quarrel over submarines. The Washington conference effected no cures; it was merely a sign of health.

The last part of the article wanders outside the subject-heading and deals with Allied debts. The writer points out were all the Allied debtors to pay America their debts the greatest sufferer would be America herself. Already there is too great a concentration of gold in America, already unemployment is rife. These coils would be greatly accentuated by the payments on which Congress is insisting.

The second article deals with the reconstruction of the American army on an efficient but economical basis. There are to be three main divisions:—a regular army; a national guard and organized reserves. The first is a small but professional force with surplus officers, N. C. O's and specialists detached to aid the unprofessional categories. The national

guard consists of a number of divisions with old war numbers and constitution and will be in fact a state militia thoroughly organised for war. The organised reserves will be a force of skeleton units but these units will, as in the national guard, be properly constituted war formations, to be filled by local men assigned to a particular duty. 2100 regular officers will be employed in the national guard and organised reserves but commissions, moreover, are given on a large scale in the R. O. T. C. annually to college graduates. Last year 90,000 students completed a years training in local units, and 1,100 graduates received commissions or certificates. Six field armies will be constituted, one from the regular army, two from the national guard and three from the organised reserves, 36 divisions in all. Further, a carefully thought out scheme of industrial mobilization will be placed in operation on the outbreak of war.

The General Staff is being reorganised into five branches. The first four deal with personnel, intelligence, operations, training and supply of a routine and continuing nature during peace and war, The fifth—the war plans—branch deals with operations and will constitute the nucleus of the G. H. Q. of the field army. Thus in war G. 1, 2, 3, and 4 remain behind under D. C. G. S. and G. 5 goes to the front, and everyone continues to deal with the problems that have fallen to his lot in peace.

In all this scheme there is no sign of militarism. Use has simply been made of recent war experience to create an organisation which, while economical of labour and money in in peace, will enable forces of any required magnitude to be mobilized in the lamentable event of war without all the vast waste of money and energy which unpreparedness inevitably entails.

II. The National Review for April is below the standard of this excellent magazine. It is over full of Lloyd George and the iniquities he is said to have perpetrated. "Episodes of the hearth", "The man who didn't win the war" and the "Fetish", that is about half the magazine contains. Such severe denunciation must incline the Premier's enemies to think more kindly of him.

"Colonel Heutsch's part in the drama of the Marne" summarizes the evidence recently collected by Lt. Col. Muller-Loebnitz. Much of it has already appeared in this Journal.

Alliance Bank of Simla, Ltd.,
 with which are incorporated
The Punjab Banking Company, Limited,
The Delhi and London Bank, Limited
 AND
The Bank of Rangoon Limited.

AUTHORISED CAPITAL	...	...	ARs. 3,00,00,000
SUBSCRIBED & FULLY PAID-UP CAPITAL...	„	„	88,51,800
RESERVE FUND	...	...	42,00,000
RESERVE AGAINST DEPRECIATION OF	...	...	„
GOVT. PAPER & OTHER INVESTMENTS..	„	„	11,00,000

- Head Office :—SIMLA.

BRANCHES :—

Abbottabad.	Calcutta.	Karachi.	Nowshera.
Agra.	Cawnpore.	Kasauli.	Peshawar Cantts.
Ajmere.	Dalhousie.	Lahore.	Peshawar City.
Allahabad.	Darjeeling.	Lahore Cantts.	Quetta.
Ambala.	Dehra Dun.	Lucknow.	Rangoon.
Amritsar	Delhi City.	Lyallpur.	Rawalpindi.
Bareilly.	Delhi, Civil Lines.	Meerut.	Saharanpur.
Benares.			
Bhopal	Ferozepore.	Multan.	Sialkote.
(Bhopal State)	Gwalior.	Murree.	Simla, Town Office.
Bombay.	Jullundur.	Mussoorie.	Srinagar (Kashmir)
		Naini Tal.	Ujjain, (Gwalior State).
		Sukkur (Sind.)	

Sub Offices.

Aminabad (Lucknow)	Jhind (Gwalior)	Hapur (Meerut)	Meerut City.
Barnagar (Ujjain)	Gulmarg (Srinagar)	Mandsour (Ujjain)	Sehore (Bhopal)
Bhilsa (Ujjain)	Sadar Bazaar (Delhi.)	Sipri (Gwalior).	Pachhar (Gwalior)
	Shujalpur (Ujjain).		
Agra City.		Bareilly City.	
Cawnpore City.		Jullunder City.	
Rawal Pindi City.		Guna (Gwalior).	

LONDON BANKERS :—

Messrs. BOULTON BROS. & Co., 39, Old Broad Street, E. C.
 BARCLAY'S BANK Ltd., 170, Fenchurch Street, E. C.

Agencies in the, Principal Cities and Towns in India, Burma and Ceylon.

Current Accounts are opened and transferred free of charge to any other Branch.

Bills of Exchange are purchased and collected, Drafts and Telegraphic Transfers issued, Letters of Credit granted.

Deposits are received for fixed periods and at short notice on favourable terms.

The Bank undertakes Banking business of every description, the purchase and sale of Government Paper Stocks and Shares and affords all possible facilities to its Constituents.

Rules of Business and any further information can be obtained on application to Head Office or any of the Branches.

Journal

OF THE

United Service Institution of India.

Published under the Authority of the Council.



SIMLA :
UNITED SERVICE INSTITUTION OF INDIA.

Published Quarterly.

—o—o—

Price Rupees 2-8.

Printed and published by M. MANZUR ALI at the ARMY PRESS, SIMLA.
All rights Reserved.

United Service Institution of India.

RULES OF MEMBERSHIP.

ALL officers of the Royal Navy, Army, Royal Air Force, Colonial Forces, and of the Indian Defence Force, and Gazetted Government Officers shall be entitled to become members without ballot, on payment of the entrance fee and annual subscription.

The Council shall have the power of admitting as honorary members the members of the Diplomatic Corps, foreign, naval and military officers, foreigners of distinction, other eminent individuals, and benefactors to the Institution, not otherwise eligible to become members.

Life Members of the Institution shall be admitted on the following terms :—
Rupees 75 + entrance fee (Rs. 10) = Rs. 85.

Ordinary members of the Institution shall be admitted on payment of an entrance fee of Rs. 10 on joining, and an annual subscription of Rs. 10, to be paid in advance. The period of subscription commences on 1st January.

Subscribing members of the Royal United Service Institution, Whitehall, London, are not liable for entrance fee while the affiliation rules are in force.

Life members receive the Journal of the Institution post free anywhere, but ordinary members only in India. All members may obtain books from the library on paying V. P. postage.

Honorary Members shall be entitled to attend the lectures and debates, and to use the premises and library of the Institution without payment; but should they desire to be supplied with the Journal, an annual payment of Rs. 10, in advance, will be required.

Divisional, Brigade and Officers' Libraries, Regimental Messes, Clubs, and other subscribers for the Journal, shall pay Rs. 10 per annum.

Serjeants' Messes and Regimental Libraries, Reading and Recreation Rooms shall be permitted to obtain the Journal on payment of an annual subscription of Rs. 8.

If a member fails to pay his subscription for any financial year (ending 31st December) before the 1st June in the following year, a registered notice shall be sent to him by the Secretary inviting his attention to the fact. If the subscription is not paid by 1st January following his name shall be posted in the Reading Room for six months and then struck off the roll of members.

Members joining the Institution on or after the 1st October, will not be charged subscription on the following 1st January, unless the Journals for the current year have been supplied.

Members are responsible that they keep the Secretary carefully posted in regard to changes of rank and address. Duplicate copies of the Journal will not be supplied free to members when the original has been posted to a member's last known address, and not been returned by the post.

Members or Subscribers to the Journal, intimating a wish to have their Journals posted to any address out of India, shall pay in advance Rupees 1 per annum, to cover foreign postage charges, but Life Members who have left India shall not be liable for foreign postage on Journals.

All communications shall be addressed to the Secretary, United Service Institution of India, Simla.

Contributions to the Journal.

All papers must be written in a clear, legible hand, and only on one side of the paper. All proper names, countries, towns, rivers, etc., must, when in manuscript, be written in capital letters. All plans must have a scale on them.

Contributors are responsible, when they send articles containing any information which they have obtained by virtue of their official positions, that they have complied with the provisions of A. R. I., Vol. II., para. 487, and King's Regulations, para. 453.

Anonymous contributions under a *nom-de-guerre* will not be accepted or acknowledged; all contributions must be sent to the Secretary under the name of the writer and the paper will, if accepted, be published under that name unless a wish is expressed for it to be published under a *nom-de-guerre*. The Executive Committee will decide whether the wish can be complied with.

The Committee reserve to themselves the right of omitting any matter which they consider objectionable. Articles are only accepted on these conditions.

The Committee do not undertake to authorise the publication of such papers as are accepted, in the order in which they may have been received.

Contributors will be supplied with three copies of their paper *gratis*, if published.

Manuscripts of original papers sent for publication in the Journal will not be returned to the contributor, unless he expresses a wish to have them back and pays the postage.

Military Widows' Fund, British Service.

This Fund enables a British Service (Army) officer, by subscribing from Rs. 2 to Rs. 4 monthly, to assure, in the event of his death while on the Indian Establishment, immediate payment :—

To his widow	Rs. 5,000	to	Rs. 6,000
For each child	„ 500	to	„ 750

Payments are made immediately on receipt of report of death, irrespective of death occurring in or out of India.

The sum paid to the widow varies with subscription and the sum for each child varies with age of child. Subscriptions are based on the pay of the officer.

Benefits are payable whether the deceased officer's family is residing in India or not.

It is to the advantage of an officer to join the Fund on his first tour of service in India, as otherwise, on joining it in a subsequent tour he would have to pay subscriptions for any previous tours in the country as a married officer.

The Fund (late Queen's Military Widows' Fund) was established in 1820, to assist families of British Service (Army) officers dying in India, and mainly to enable them to return home without delay.

The Fund is controlled by a Committee consisting of and elected by subscribing officers serving at Army Head Quarters, Simla.

For admission and rules apply to :—

The Secretary,
MILITARY WIDOWS' FUND,
Army Head Quarters,
Simla.

United Service Institution of India.

PATRON.

His Excellency the Viceroy and Governor-General of India.

VICE-PATRONS.

His Excellency the Governor of Madras.
His Excellency the Governor of Bombay.
His Excellency the Governor of Bengal.
His Excellency the Commander-in-Chief in India.
His Excellency the Governor of the U. P. of Agra and Oudh.
His Excellency the Governor of the Punjab.
His Excellency the Governor of Burma.
His Excellency the Governor of Bihar and Orissa.
His Excellency the Naval Commander-in-Chief, East Indies.
The General Officer Commanding-in-Chief, Northern Command.
The General Officer Commanding-in-Chief, Southern Command.
The General Officer Commanding-in-Chief, Eastern Command.
The General Officer Commanding-in-Chief, Western Command.

MEMBERS OF THE COUNCIL, 1922-23.

Ex-officio Members.

- | | |
|--|--|
| 1. The Chief of the General Staff | 5. The Quartermaster General in India. |
| 2. The Secretary, Army Department. | 6. The Director, Medical Services. |
| 3. The Hon'ble Mr. Denys Bray, C.I.E.,
C.B.E. | 7. Col. Sir S. Crookshank, K.C.M.G., C.B.,
C.I.E., D.S.O., M.V.O. |
| 4. The Adjutant General in India. | 8. The Director, Military Operations—
General Staff. |

Elected Members.

- | | |
|--|--|
| 1. Major Genl. H. F. Cooke. C.B., C.S.I.
D.S.O. | *6. Lt.-Col. C.J.E. Auchinleck, D.S.O., O.B.E. |
| *2. Col. H. Rowan-Robinson C.M.G., D.S.O. | 7. Col. W. D. Waghorn, C.B., C.M.G. |
| 3. Mr. G. R. Clarke, C.S.I., O.B.E. | 8. Dr. G. T. Walker, C.S.I. |
| 4. Col. Sir P. O. Hambro, K.B.E. C.B.,
C.M.G. | • 9. Lt.-Col. F. S. Keen, D.S.O. |
| *5 Col. H. R. Nevill, C.I.E., O.B.E. | *10. Major H. G. Martin, D.S.O., O.B.E. |

• Members of the Executive Committee and in addition.

E. HAWARD, Esq.

SECRETARY & EDITOR

SUPERINTENDENT

LIBRARIAN

BANKERS

... LIEUT.-COL. F. A. FINNIS.

... S. SGT. E. F. CLARKE, I.O.D.

... Miss E. K. SUSSENS.

... ALLIANCE BANK OF SIMLA, Ltd.

1. The United Service Institution of India is situated at Simla.
2. Officers wishing to become members of the United Service Institution of India should apply to the Secretary. The rules of membership are printed on the opposite page.
3. The reading-room of the Institution is provided with all the leading newspapers, magazines, and journals of military interest that are published.
4. There is a well-stocked library in the Institution, from which members can obtain books on loan, free. Suggestions for new books are solicited, and will be submitted to the Committee. Books are sent out to members V. P. for the postage.
5. The Institution publishes a Quarterly Journal in the months of January, April, July and October which is issued postage free to members in India and to all life members; but ordinary members wishing to have their journals sent to any address out of India must pay in advance Re. 1 per annum to cover foreign postage charges.
6. Members and the public are invited to contribute articles to the Journal of the Institution for which honoraria will be awarded by the Executive Committee. Rules for the guidance of contributors will be found on the opposite page.
7. Members are responsible that they keep the Secretary carefully posted with regard to changes of address.
8. When on leave in England, members can, under the affiliation rules in force, attend the lectures and make use of the reading-room, etc., of the Royal United Service Institution, Whitehall, on payment of a subscription of 5 shillings per six months.

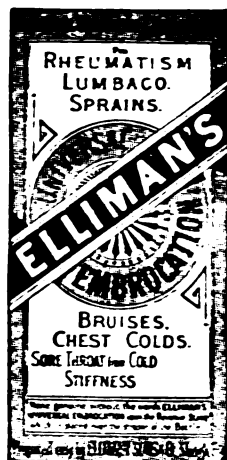
Elliman's UNIVERSAL Embrocation

FOR HUMAN USE.

Rheumatism,	Sprains,
Lumbago,	Backache,
Sore Throat	Bruises,
from Cold,	Slight Cuts,
Cold at the	Cramp,
Chest,	Stiffness
Neuralgia	after exercise.
from Cold.	

Elliman's Universal Embrocation.

Sold in Bottles price 2/- & 4/-.



Prepared only by

ELLIMAN, SONS & CO., SLOUGH, BUCKS, ENGLAND.

United Service Institution of India,

OCTOBER 1922.

CONTENTS.

1. Editorial.	319
2. Gold Medal Prize Essay 1921-22.	323
3. Transportation with the B. E. F. in France	342
4. Wireless <i>versus</i> Cable	364
5. The Training of the Indian Platoon Commander	369
6. Raids and Reprisals on the N.W.F.	383
7. Crecy and Poitiers	393
8. Big Game in Somaliland	402
9. Current Literature	412
10. Reviews	415

SECRETARY'S NOTES.**I.—New Members.**

The following new members joined the Institution from the 16th June 1922 to the 15th September 1922.

Life Memb

Lieut. E. S. Wheatley.

Capt. T. C. E. Barstow.

Capt. C. J. R. Turner.

Major F. H. Farebrother

Capt. F. J. W. Firth.

Ordinary Members.

Col. M. R. Walsh.

Col. G. W. Grogan.

Major A. M. Arnott.

Capt. E. G. Campbell.

Lieut. R. L. de Brisay.

Lieut. P. J. Hillard.

Lieut. W. H. G. Beard.

Col. H. T. SawycJ.

Lieut. A. J. Wilson.

Lieut. R. Morrison.

Capt. W. C. Dawson.

Lieut. H. Walsh.

Lieut. A. O. L. Burke.

Capt. J. H. Souter.

Major E. M. Steward.

Major-Genl. G. N. Cory.

Capt. H. B. Humphrey.

II.—Examinations.

Books on Military History and Languages with Dictionaries are available in the Library and the following list of books, which is complete in accordance with the War Office list, may be found useful for reference by officers, studying for promotion examinations or entrance to the Staff College.

Secretary's Notes.

iii

MILITARY HISTORY. (SPECIAL PERIOD).

1. *The Campaign of the British Army in France and Belgium up to 20th November 1914.*

A.—OFFICIAL ACCOUNT.

Sir John French's Despatches.

B.—OTHER BOOKS.

40 days in 1914 by General Maurice (new edition).

The Battle of the Marne, by G. H. Perris.

1914, by Viscount French.

General sketch of the European War, by Belloc.

The Great War, by Colonel Sedgwick.

My memoirs, by Ludendorf.

Falkenhayn's book.

Von Kluck's book.

British Campaign in France, Flanders, by Conan Doyle, 1914.

Nelson's History of the War.

Ypres, by German General Staff.

Oxford pamphlets. August 1914. The Coming of the War, by S. Williamson.

Oxford pamphlets. August 1914. No. VII and X.

Times Documentary History of the War, Vol. V. Military, Part I.

Times Documentary History of the War, Vol. VIII Part III.

Der Grosse Krieg Schlacht bei Mons.

Der Grosse Krieg Schlacht bei Longwy.

2. *The Palestine Campaign.*

A.—OFFICIAL ACCOUNT.

A brief record of the advance of the Egyptian Expeditionary Force 1919.

B.—OTHER BOOKS.

Allenby's final triumph, by W. T. Massey.

How Jerusalem was won, by W. T. Massey.

3. *Organization of Army since 1868.*

A.—ORGANIZATION OF ARMY SINCE 1868.

History of British Army, by Fortescue.

Outline of Development of British Army, by Genl. Anderson.

Our Fighting Services.....by Sir Evelyn Wood.

B.—FORCES OF THE EMPIRE.

The Statesman's Year Book.

Army List.

Articles in Newspapers and Magazines *viz.*, R. U. S. I.

Army Quarterly, journal of the U. S. I. of India, etc.

4. *Development and Constitution of the British Empire.*

A.—THE BRITISH EMPIRE.

Encyclopedia Britannica—(Contains much concentrated information).

The Statesman's Year Book.

Whitaker's Almanack.

The Colonial Office List.

The British Empire and its History, by E. G. Hawke.

The Government of British Empire, by Jenks 1918.

The British Empire (6 lectures) by Sir C. P. Lucas 1918.

The foundation and growth of the British Empire, by J. A. Williamson 1918.

The beginnings of English Overseas Enterprise, by Sir C. P. Lucas 1917.

The Government of England, by L. A. Lowell 1912.

The Expansion of the British Empire, by W. H. Woodward 1900.

Overseas Britain, by E. F. Knight 1907.

The origin and growth of the English Colonies and of their system of Government, by H. E. Egerton 1903.

A short History of Politics, by Jenks 1900.

The English Constitution, by Bagehot 1909.

The Expansion of England, by Sir J. Seely 1883.

Introduction of the study of the law of the Constitution, by A. V. Dicey 1908.

England in the Seven Years' War, Sir J. Corbett 1907.

Selected Speeches and Documents on British Colonial Policy—
2 Vols. A. B. Keith, 1918.

B.—BOOKS ON SPECIAL PORTIONS OF THE EMPIRE OR WORLD.

The rise and expansion of British Dominions in India, by Sir A. C. Lyall 1894.

A brief history of the Indian Peoples, by Sir W. H. Hunter 1907.

The Nearer East, by Hogarth 1902.

Secretary's Notes.

Modern Egypt, by Cromer 1908.

The History of Canada, by W. L. Grant.

Nova Scotia, by B. Wilson 1911.

Report on British North America, by Sir C. P. Lucas.

The Union of South Africa, by R. H. Brand 1909.

Short History of Australia, by E. Scott.

History of the Australasian Colonies, by Jenks 1912.

The English in the West Indies, by J. A. Froude 1888.

The Lost Possessions of England, by W. F. Lord 1896.

5. Military Geography.

Naval and Military Geography of the British Empire, by Dr
Vaughan Cornish 1916.

Outlines of Military Geography, by Col. A. C. Macdonnell 1911.

Introduction of Military Geography, by Col. E. S. May.

Imperial Defence.....by Col. E. S. May.

Britain and the British Seas by H. J. Makinder 1907.

Military Geography, by Macguire.

Imperial Strategy, by Repington.

War and the Empire, by H. Foster.

Historical Geography of British Colonies (Dominions) 7 Vols.
by Sir C. P. Lucas 1906-17.

Vol. 1 Mediterranean.

Vol. 2 West Indies.

Vol. 3 West Africa.

Vol. 4 South Africa.

Vol. 5 Canada.

Vol. 6 Australia.

Vol. 7 India.

The Influence of Sea Power on History, by A. I. Mahan 1890.

Historical Geography of the British Empire by Hereford
George.

The Mastery of the Pacific, by A. R. Colquhoun 1902.

Frontiers.....by C. B. Fawcett 1918.

III.—Payment for Articles in the Journals.

Articles accepted for publication in the Journal are paid for,
and a sum of approximately Rs. 400 is awarded for articles and
reviews published in each Quarterly Journal.

IV.—Contributions to the Journal.

With reference to Army Regulations, India, Volume II, paragraph 487, and King's Regulations, paragraph 453, as amended by Army Order 340 of 1913, intending contributors to the Journal of the United Service Institution of India are informed, that action to obtain the sanction of His Excellency the Commander-in-Chief to the publication of any article in the Journal of the United Service Institution of India will be taken by the Committee. Contributors are, therefore, responsible that the sanction of their immediate superior has been obtained, and this should be noted on all articles sent for publication. Articles need not be submitted in duplicate.

Contributors must have their articles either typed or printed.

2. It has been decided to introduce two new items in the Journal headed—

i. Criticisms.

ii. Notes on current Military and Naval questions.

The rules for (i) to be—

That the criticism should be headed with the title of the article criticised, and the date of the Journal in which published.

That criticisms should be signed with a nom-de-plume, but that critics must disclose their identity to the Secretary.

The rules for (ii) to be the same as for Articles.

Instructions for the Preparation of Drawings and Plans for Reproduction by Lithography.

These should be in *jet* black. No washes nor ribands of colour should on any account be used.

If it is absolutely necessary to use colour (and these are only permissible in line work or names) the following will reproduce photographically, *i e.* :—

Dark red, dark orange, dark green. No other colour should on any account be used.

V.—Library Rules.

1. The Library is only open to members and honorary members of the United Service Institution of India, members are requested to look upon books as not transferable to their friends.

2. No book shall be taken from the Library without making the necessary entry in the register. Members residing permanently or temporarily in Simla are requested to enter their addresses.

3. The United Service Institution of India is open all the year round—including Sundays—from 9 a. m. until sunset. Books may be taken out at any time provided Rule 2 is complied with.

4. A member shall not be allowed, at one time, more than three books or sets of books.

5. Papers, magazines, "Works of reference" or books marked "Not to be taken away", or noted as "Confidential" may not be removed.

6. No particular limit is set as to the number of days for which a member in Simla may keep a book, the Council being desirous of making the library as useful as possible to members; but if after the expiration of a fortnight from date of issue it is required by any other member it will be recalled.

7. Applications for books from members at outstations are dealt with as early as possible, and books are despatched per Registered V. P. P. They must be returned carefully packed per Registered parcel post within one month of date of issue, or application made for permission to retain them for a further period. This will always be granted unless the book is required by another member.

8. If a book is not returned at the end of four months, it must be paid for, without the option of return, if so required by the Executive Committee.

9. Lost and defaced books shall be replaced at the cost of the member to whom they were issued. In the case of lost books which are out of print the value shall be fixed by the Executive Committee, and the amount, when received, spent in the purchase of a new book.

10. The issue of a book under these rules to any member implies the latter's compliance with the rules, and the willingness to have them enforced, if necessary, against him.

11. A list of all books presented and purchased and also a list of books useful to members studying for the Staff College and promotion Examinations will be found, under Secretary's Notes, in the quarterly issue of the U. S. I. Journal. Members are invited to note any books which they think might with advantage be procured for the Institution. The suggestions will be placed before the Secretary.

12. Members are invited to contribute presents of books, maps, and photographs of naval and military interest. These may be addressed to the Secretary U. S. I. of India, Simla. They will be duly acknowledged.

VI.—Library Catalogue.

Under Revision.

VII.—Gold Medal Prize Essay.

GOLD MEDAL PRIZE ESSAY COMPETITION 1922-23

The Council have chosen as the subject for the Gold Medal Essay for 1922-23 the following :—

“TO WHAT EXTENT WOULD THE USE OF LATEST SCIENTIFIC AND MECHANICAL METHODS OF WARFARE AFFECT OPERATIONS ON THE NORTH WEST FRONTIER OF INDIA.”

The following are the conditions of the competition :—

- (1) The competition is open to all gazetted officers of the Civil Administration, the Royal Navy, Army, and Royal Air Force or Indian Defence Force who are members of the U. S. I. of India.
- (2) Essays must be printed or type-written and submitted in triplicate.
- (3) When a reference is made to any work, the title of such work is to be quoted.
- (4) Essays are to be *strictly anonymous*. Each must have a motto, and enclosed with the essay, there should be sent a sealed envelope with the motto written on the outside and the name of the competitor inside.
- (5) Essays will not be accepted unless received by the Secretary on or before the 30th June 1923.
- (6) Essays will be submitted for adjudication to 3 Judges chosen by the Council. When the decisions of the 3 Judges are received the Committee will submit the four essays, placed first in order by the Judges, with their recommendations on the award of the Gold Medal to the Council, who will decide whether the Medal is to be awarded and whether the essay may be published.
- (7) The name of the successful candidate will be announced at a Council Meeting to be held in September or October 1923.
- (8) All essays submitted are to become the property of the United Service Institution of India, *absolutely* and authors will not be at liberty to make any use whatsoever of their essays without the sanction of the Council.
- (9) Essays should not exceed about 15 pages of the size and style of the Journal, exclusive of any appendices, tables or maps.

By order of the Council,

SIMLA, }
30th August 1922. }

F. A. FINNIS, LIEUT.-COL.
Secretary, U. S. I. of India.

VIII.—Army List Pages.

The U. S. I. is prepared to supply members and units with manuscript or typewritten copies of Indian Army List pages, at the following rates:—

Manuscript, per page Re. 1.

Typewritten, per page Rs 2.

IX.—Books.

Books Purchased.

<i>Title.</i>	<i>Author.</i>
1. Abdication ... ..	... Candler.
2. Statesmans Year Book (1932) ... ..	... Sir J. Keltie.
3. The last Four Months ... ..	... { Major-General ir F. Maurice.
4. The Strategic Geography of the Great Powers	... V. Cornish.
5 The Last of the Romanoffs ... ..	... C. Rivett.
6. The History & Economics of Transport ... ..	... Kirkaldy & Evans.
7. Principles of Political Science ... ..	... R. N. Gilchrist.
8. Imperial Defence after the War ... ..	... R. F. Cottrell.
9. Ian Hamilton's Despatches from Dardanelles	... Ian Hamilton.
10. Battle of Jutland (Official despatches with appendices) ...	... "Official".
11. Tragedy of Lord Kitchener ... ..	... Viscount Esher.
12. Under Ten Viceroys ... ..	... { Major-General N. Woodyat.

Books Presented.

1. A Geography of Imperial Defence (Mesara, Sifton Praed & Co., London).	{ V. Cornish.
2. The Punjab & the War. (Punjab Government)	... M. S. Leigh.
3. Anti-Aircraft Defence. (C. A. J.—U. S. A.)	... { By the Officers 1st Anti-A. Bn. C. A. C.
4. Records of the 4th Madras Pioneers (now 6th)	... { Major H. F. Murland.
5. Historical Record of the 2nd Q. V. O. Sappers & Miners	{ Lieut. Col. C. H. Roe.
6. Work of the Royal Engineers in the European War 1914-18 (Geological).	{ R. E's Chatham.
7. Frontier Warfare, a series of ten Lectures (Thacker & Co., Bombay).	{ By Frontier.

X.—Journals for 1920.

I SHALL BE GLAD TO RECEIVE FROM MEMBERS ANY SPARE COPIES OF THE UNITED SERVICE INSTITUTION JOURNAL FOR JANUARY APRIL AND JULY 1920.

XI.—

MESSRS. HODDER & STOUGHTON, Warwick Square, London, E. C. have a re print in hand of "The Story of the Fourth Army in the battles of the 100 days, August 8th—November 11th 1918, by Major-General Sir Archibald Montgomery", which will be ready very shortly.

XII.—A Boom in Books.

MESSRS. THACKER SPINK & Co. of Calcutta and Simla, who have already completed their first century of bookselling and publishing in India and are still progressive, have just commenced with the August issue of "*The Bookshelf*," a new and improved series which shows a commendable effort to provide an impetus to the book reading habit in India. "*The Bookshelf*" is distributed free to book-buyers in consideration of orders anticipated. It is an attractive list of books old and new and would do credit to any one of the largest firms in Europe or America.

Messrs. Thacker Spink & Co., have also commenced to issue a new series of handy catalogues in which they aim to list books in all subjects in every class of literature. Those now ready include Electricity, Politics and Economics, Banking and Finance, Co-operation and Co-operative Banks, Biography, History, Theology, and Travel, while those to appear very shortly will include every branch of Engineering, Industrial Manufacture and Physical Science, as well as books on the Theory and Practice of Commerce and Commercial subjects generally. Catalogues books on all other subjects are promised in due course.

The Journal

OF THE

United Service Institution of India.

Vol. LII. OCTOBER 1922. No. 229.

EDITORIAL

THERE can be little doubt that the controversy now raging round the Royal Air Force is one that is of considerable interest to all members of the services. Let us say at once that we support the development of the Air Force and of civil aviation. There can be no doubt that the aeroplane has placed in the hands of man a new and powerful weapon of war.

This new weapon makes possible in civilized warfare the intense aerial bombardment of its highly populated administrative and industrial centres, and is capable therefore of far-reaching effects in war. The best method of defence is to attack, and in order to meet and counter the danger of aerial attack our Air Force must be developed. In this connection the representations made by the Army before the Committee of Imperial Defence which have since been published should be read by all officers.

* * * * *

The case for the Army was presented as follows :—

1. The Army Committee appreciate :—

- (1) That an important part of future fighting may take place in and from the air.

X.—Journals for 1920.

I SHALL BE GLAD TO RECEIVE FROM MEMBERS ANY SPARE COPIES OF THE UNITED SERVICE INSTITUTION JOURNAL FOR JANUARY APRIL AND JULY 1920.

XI.—

MESSRS. HODDER & STOUGHTON, Warwick Square, London, E. C. have a re print in hand of "The Story of the Fourth Army in the battles of the 100 days, August 8th—November 11th 1918, by Major-General Sir Archibald Montgomery", which will be ready very shortly.

XII.—A Boom in Books.

MESSRS. THACKER SPINK & Co. of Calcutta and Simla, who have already completed their first century of bookselling and publishing in India and are still progressive, have just commenced with the August issue of "*The Bookshelf*," a new and improved series which shows a commendable effort to provide an impetus to the book reading habit in India. "*The Bookshelf*" is distributed free to book-buyers in consideration of orders anticipated. It is an attractive list of books old and new and would do credit to any one of the largest firms in Europe or America.

Messrs. Thacker Spink & Co., have also commenced to issue a new series of handy catalogues in which they aim to list books in all subjects in every class of literature. Those now ready include Electricity, Politics and Economics, Banking and Finance, Co-operation and Co-operative Banks, Biography, History, Theology, and Travel, while those to appear very shortly will include every branch of Engineering, Industrial Manufacture and Physical Science, as well as books on the Theory and Practice of Commerce and Commercial subjects generally. Catalogues books on all other subjects are promised in due course.

ages of such a

v short at the

nowledge, and

importance
e demands
y recruit-
Army. It
sation to
other.

o draw
ve co-
ent of
omy
each
of

is
e
r

United States

Vol. II

THERE is a...
international...
support...
There can be...
of that...
The...
interest...
and...
effects...
in...
Foreign...
made by...
which have...

The...
interest...
and...
effects...
in...
Foreign...
made by...
which have...

- The... of the Army was presented...
1. The Army Committee appreciated...
- (2) That an important part of the...
place in and from the...

lin.
al surpr

(2) That the objectives of an enemy will be the destruction of the morale of the people by bombing of highly populated industrial and administrative centres.

(3) That the only effective method of ensuring adequate defence against aerial attack is by being in a position to adopt similar methods with adequate aerial forces,

(2) The Army Committee believe that if these assumptions are true, it follows that the need for an Air Ministry and Air Force is established beyond dispute.

3. Consequently it is apparent that there is sufficient scope and work for an Air Ministry and Air Service apart from the requirements of either the Royal Navy or Army. As the primary function of the Air Ministry will be to ensure a state of efficiency for aerial defence and offence, it will be their duty to supervise the creation of an effective civil aviation force, used for commercial and mail services, supported by State subsidies. The functions of the Ministry would include :—

(1) Aerial expansion for war.

(2) Administration of the Royal Air Force.

(3) Research, investigation, design and construction, and instruction.

4. The Army Committee desires, on the other hand, to press the claims of the Army to be in complete control of the Air Services which are ancillary to the requirements of the land forces, and which have now become an essential and integral part of those forces. Aerial personnel should be trained with the arms with which it would have to co-operate in war. For example, the direction of artillery fire is a matter primarily for officers trained in artillery science and methods; the acquisition of sufficient knowledge of the art of flying is only incidental. The same argument may be applied to reconnaissance. The flying life of an officer is comparatively short. So far as the Army is concerned, he should normally be seconded from, and revert at the conclusion of a period

of years to, his unit in the Army. The advantages of such a system are :—

- (1) The flying officer's career is not cut unduly short at the conclusion of his period of flying efficiency.
- (2) A reserve of flying officers is created.
- (3) A higher general state of efficiency, knowledge, and experience in the Army is obtained.

5. The Army Committee, in short, recognises the importance of independent action in the air, but at the same time demands that the Air Forces ancillary to the Army should be chiefly recruited from and wholly under the executive control of the Army. It looks for power of expansion and flexibility of organisation to permit of easy reinforcement as between one service and another.

6. In this connection the Army Committee desires to draw attention to the vital need for a closer and more effective co-ordination of the three Services. It is only by the establishment of effective machinery of co-ordination that efficiency and economy can be obtained, that the true proportional requirements of each Service can be ascertained, and, and that the proper allocation of funds can be assessed.

* * * * *

With these views few will be found to differ. But there is another side to the controversy. There are those who would have us believe that the Air Force is capable of, decisive action in war irrespective of assistance from the other services. Such views should however at present be accepted with caution in view of the lack of evidence upon which to base any sound decision.

The evidence afforded by the Air Force operations in Somaliland, Mesopotamia and the N. W. F. of India cannot so far be considered conclusive. It seems more than probable that the new aerial weapon will be more effective against civilised nations, than against uncivilised tribes. Though the latter may at the outset be alarmed by the employment of methods which they look upon as supernatural, they will rapidly realise the limitations of the aeroplane. When the element of 'supernatural surprise' has

worked off and the tribesman learns to avoid aerial punishment by dispersion, there will remain no objective against which the æroplane can operate.

* * * * *

From India's point of view therefore it is doubtful if the Air Force has at present any special rôle which could be carried out independently of the Army.

There is no country on its borders at the moment capable of aerial offensive on a serious scale. The countries which border India are largely independent of industrial and administrative centres and provide few suitable objectives for aerial offensive. In the event of Afghanistan attacking India, the bombing of Kabul might be effective, but such action could be taken by the bombing squadrons of the Army.

* * * * *

In these times of 'financial stringency' there is a tendency to look upon the Air Force as possibly providing a cheap and easy method of waging war. In our opinion it is not possible at present to give an opinion of any value as to whether or not aeroplanes will provide an economical method of defence. Few soldiers in view of recent events in Mesopotamia are likely to place entire reliance on the ability of the Air Force to cope with invasion by land Forces.

* * * * *

Gold Medal Prize Essay

By Major H. G. Martin, D.S.O., O.B.E., R.F.A.

"INDIA AND THE NEXT WAR."

*"There is but one art—to omit!.....A man who
knew how to omit would make an Iliad of a daily paper....."*

R L Stevenson's Letters

Part 1.—The Probable Nature of Future War.

"WAR" is a general term, and a discussion of the subject applicable—let us say—to a frontier expedition would be manifestly inadequate to another cataclysm such as that of 1914-18; so the all-important question arises at the outset: with what manner of war have we to deal? Obviously, then, our first task must be to consider the probable nature of India's future wars. These we may class generically in four categories:—

- (1) Limited Indian campaigns.
- (2) Unlimited Empire-war, *ex-India*.
- (3) Unlimited war in India, and on her borders.
- (4) A combination of (2) and (3) above.

(1). *Limited Indian campaigns*.—A campaign in this category may vary in magnitude from a punitive operation in Malabar to a war forced upon us in Afghanistan. Such warfare, it must be understood, is to be regarded as "limited" *from our stand-point only*, and will retain its character as such precisely to the extent that the trouble remains localized; on the part of the enemy, on the contrary, his military efforts must generally amount to unlimited war from the outset.

The conduct of such operations is of course essentially the responsibility of India; and her forces will form the spear-head though the blow may be thrust home with help from overseas. Now, in India's present situation, initial reverses or an unduly

deferred offensive may well be cause sufficient to extend the scope of a limited campaign till it attains the dimensions of unlimited war. Hence, above all else, our first essential is here that perfect co-ordination of policy and strategy which, as we all know, alone permits the initiative to be seized and relentless pressure to be maintained until decisive success has been won. But the most cursory survey of our past Indian campaigns—notably the successive Afghan wars—makes it only too apparent that it is precisely this co-ordination that has been, on occasion conspicuously lacking in our councils. And the future outlook in this respect is even more anxious. As a result of the Reforms, the Government is now in a permanent minority in the Legislative Assembly; and, though Defence is still a reserved subject, the experience of the past session shows clearly the extent to which that body can bring indirect pressure to bear. Nor will the position improve until racial antipathy has decreased; and politician and electorate alike have been educated in the true meaning of Defence, and in the military value of a martial, as opposed to a non-martial, race.

To sum up: if our strategy is permitted to keep pace with our policy, a limited war of this nature need present no serious difficulties—as long as it remains an isolated operation; on the other hand, as a grievous addition to our burden in an unlimited war, the minor campaign will at once assume the character of the major commitment.

(2) *Unlimited Empire-war, ex-India.*—With the conclusion of the late war, the centre of gravity of the Empire moved from the North Sea to the Western Pacific. Therefore, since the discussion of a concrete case must always carry more conviction than abstract generalities, we propose briefly to consider the Pacific problem as a source of future war.* According to a prominent school of thought in England, Russia, and the United States, Japan has used the Anglo-Japanese Alliance to enable her successively to eliminate Russia and Germany from the Western Pacific; and the Washington Conference, while it has lessened the burden of naval armaments, has yet left racial ideals, racial antagonisms, and the

* For the most up to date discussion of the problem see "The Problem of the Pacific in the XXth Century" by GOLOVIN and BUBNOV.

relative strengths of the rival navies, unchanged. On grounds both geographical and ethnical Japan still holds herself entitled to a preferential treatment in the Chinese market amounting to monopoly; her surplus population still demands an outlet for expansion unretarded by the competition of low grade labour which it encounters in China and Korea; and, as a means to fulfilling these ideals, the hegemony of the Western Pacific has been, and still is, her goal. True, the signature of the "Four Power Treaty" seems to preclude war for the next ten years; but the recent history of such treaties is not convincing, and ten years is at best but a moment in the evolution of nations.

Such, then, are the arguments of this school. If these arguments are sound, the problem is this: at her appointed time shall we acquiesce in Japan's claim to the hegemony of the Western Pacific, with all that this hegemony must imply;* or shall we fight? That of course is a question of policy for the statesman to decide. But, if we are to fight, it is clear that the communications of our fleet must stretch forward through Bombay and Colombo to Singapore and Hong Kong, while India herself must be organized as a vast advanced base for our armies. In such a war, an actual invasion of India from overseas is inconceivable; so, if the local situation permits, all her resources will be concentrated on the assistance of the Empire in external theatres. Therefore, though India's army is primarily maintained for India's needs, no military organization can be complete that does not contemplate possible expansion in co-operation with the Empire's forces overseas; while—economically—not only must every effort be made to render India self-supporting, but her vast natural resources must be developed until they constitute an actual source of munitions and supplies proportionate to her potential wealth.†

*"Australasia is nearly as large as Europe, while its population is less than that of the city of London. Surrounding Australasia are Asian empires with a population approximately ten times greater than that of Europe."—"The Day of the Saxon" by Homer Lea.

†For India's economic possibilities and present limitations see the "Report of the India Industrial Commission, 1916-18", the "Industrial Handbook, 1919, Indian Munitions Board."

To carry out this rôle it is obvious that peace on her borders and an absence of internal unrest are India's two prime essentials; for on these two factors must directly depend the scope of the assistance, both military and economic, which she will be in a position to render. It must be apparent, therefore, that in time of peace we cannot afford either to ignore our local enemies or to experiment upon them with the panaceas of political visionaries; it is our bounden duty to put our house thoroughly in order during the ten years' respite that we are promised before the Empire may again find itself engaged in unlimited war.

(3). *Unlimited war in India, and on her borders.*—For us here in India to-day what are the particular storm-clouds that the future may hold in store? It is difficult to foresee; for Asia is in the melting-pot from Angora to Peking. The following facts, however, are sufficiently clear. Russia is bankrupt, and machinery for the transportation and maintenance of her armies is almost wholly lacking, while—from beyond the Oxus—come rumours of a nationalist movement which bids fair to throw back the Bolshevik from Turkistan.* Further, largely owing to the treaties of Kars and Angora and to the Greek failure at Sakaria, the nationalists are to-day the only real power in Turkey. Consequently, though Russia must ultimately recover—and, organized and officered by Germans, her recovery may well be rapid—the immediate future in Central Asia and the Middle East would appear to lie at least as much with Islamic pan-nationalism as with Bolshevism. It is certainly conceivable, therefore, that sooner or later we may find ourselves confronted by an Islamic confederacy stretching from Kabul to the Bosphorus.

If, in the alternative event, the future lies with Russia, we can safely assume that, whatever form her Government may take, its policy in regard to the Indian hinterland will pursue the traditional Russian lines of penetration and expansion. Nor is subversive propaganda in India likely to diminish with the nearer approach of Russia to our frontiers.

Hence we see that in the not-distant future we may be faced, either by a reorganized and inherently hostile Russia, or else by an

* The above was written before the collapse of ENVER'S rebellion.

Islamic confederacy so situated that it can threaten the frontiers both of Mesopotamia and of India while exercising the profoundest influence over its co-religionists in these countries.

Now, in the event of war to the North, our military requirements are perfectly clear. We must be in a position to ensure the rapid mobilization and deployment of our field army together with the uninterrupted functioning of the State ; while reducing the calls on covering, and internal security, troops to a minimum. How does the present situation meet these requirements ? We are obliged to continue an extravagant allotment of troops to internal security duties. And of these troops the proportion of the more expensive British article is necessarily high, so the system is doubly wasteful of man-power and money. Further, owing to the improved armament of the tribes, we are obliged to maintain a covering force approximately equal to the infantry strength of our entire field army. And, since this covering force forms no part of our striking force in major operations, the first principles of strategy are violated by the allotment of so large a proportion of our troops to a role which is primarily passive. Finally, our communications in rear of the forward concentration-areas of the field army will be exposed to flank attack in war. Hence the conclusion is again forced upon us that, during the present interlude, we literally cannot afford either to nurse sedition or to tolerate the presence of a numerous and well-armed enemy in our tribal territory. Our policy should be such as to ensure that these hostile elements are either reconciled or—should that prove impossible—then rendered thoroughly innocuous, while our whole military resources are still available to give effect to our policy if need be.

But we have seen further that, owing to the advent of the Pacific Problem, the retention of India is to-day strategically more vital to the Empire than ever in the past. Therefore a struggle for our survival in India can be nothing less than unlimited Empire-war ; for, though the initial responsibility will still rest with India's army and executive, ultimately our position must be maintained by all the resources of the Empire.

We are thus brought face to face with the principle that the defence of any vital portion of the Empire is the equal concern of all its component parts. And this principle obviously demands not only a thorough co-ordination of Imperial policy but also an equally thorough co-ordination of Imperial defence, in order that combined military effect may be given to our considered policy in the last resort.*

(4). *A combination of (2) and (3) above.*—By this we mean an attack on our land-frontier, possibly in combination with internal revolt: the whole aimed at our eviction from India at a time when the Empire's whole resources are already engaged in unlimited war. The point to note here is that, in a crisis of this nature, any local operation which we are obliged to undertake can no longer be treated as "limited", but must be regarded as an extension of our battle-front in the major war, a front defeat on any part of which may be fatal to us. We know, too, that to Lenin and others of his kidney, India represents the "Achilles' heel" of the British Empire, his arch enemy; so, in the event of war in almost any quarter of the globe, it requires little effort of imagination to picture the influences that will be at work in an endeavour to oust us from India. Hence we find still further cause to emphasize the conclusions to which we have already arrived in our discussion of (3) above.

Part II.—the Financial Aspect.

We have now completed our survey of the various natures of campaign in which India may find herself engaged. But, since policy and strategy alike are rigidly controlled by financial limitations, a short *resumé* of our financial position is a necessary

A propos of policy it is interesting to note that France has lately found it expedient to sign the treaty of Angora primarily in order to consolidate her position with her Mussalman subjects in Tunis, Algeria, and Morocco. The expediency of an entente with Angora is even more obvious in our case.

For a discussion of the means to attain this co-ordination of policy and defence see "*Defence of the British Empire*" in the "*Army Quarterly*" January : 1921, and also the "*Report of the Army in India Committee*" (Introduction & Part 1)

prelude to our discussion of Indian defence in its relation to these future wars. Briefly the position is this:—

The net expenditure of the Central Government for the current year is estimated at about 106 crores; and of these, 62.18 crores or about 60 per cent. of current expenditure, are allotted to defence. Hence it would at first appear that the proportion of revenue thus allotted is so unjustifiably large that the normal functions of the State must be crippled, and its economic development seriously retarded.

There are, however, other important factors in the problem which cannot be overlooked. Firstly, we must not omit the provincial budgets from our calculations and, working on this basis, we find that in reality only some 26% of India's total expenditure is allotted to defence.

Secondly, while India is poor she is also probably by far the most lightly taxed country in the civilized world*. But India is unfortunately unique in yet another respect, in that expenditure is here regulated by the budget, as opposed to the elsewhere-universal system of budgeting for essential expenditure. Hence defence, which is notoriously nothing more or less than indispensable insurance, has had to suffer. But we have already brought our insurance so dangerously low that, in present circumstances, further reduction would be criminal folly.

At this point, it is instructive to note that those who are most insistent in their demands for a reduction in military expenditure are generally the very people who clamour either for Swaraj or at least for the immediate grant to India of complete Dominion status. But they conveniently ignore the necessary corollary to either of these consummations. India's present military expenditure amounts to 2s 6d per head of population. Now Swaraj, or complete independence, would entail the maintenance by India of forces, naval, military, and air, adequate to meeting all her

*In Great Britain taxation and public debt now amount to £22 & £200 per head respectively; in India, to 9d and 21s.

needs; and these, in the light of history and the present position in Asia, are not likely to be small. To take an instance: Japan, a comparatively poor Asiatic power, found it necessary to spend 7s 5d per head on defence in 1913-14; and, since the costing charges of an army or navy are $2\frac{1}{4}$ times as great now as they were then the maintenance of similar forces to-day would cost 16s 8d per head, or about seven times the rate per head that India is at present paying. Obviously then, in this quarter lies no relief.*

In the second alternative, India can hardly deny that her co-partners in the British Commonwealth would be fully justified in demanding that she should accept her fair share in the common burden of the Imperial defence, in return for her admission on equal terms; but defence is costing 75s per head in Great Britain to-day; in India 2-6; so in this quarter too the outlook for reduction is equally discouraging.

We are in fact involved in a vicious circle. Light taxation, with its natural concomitants—a contented people, and more money available for economic expansion—are *primary military essentials*; so, in view of universal trade-depression and of the deficits in both the central and provincial budgets, the soldier is the first to admit that reduction in military expenditure is most desirable. But it is the duty of the army to provide for the safety of the frontier and for internal security. Nor is reduction in these quarters possible until the Central Asian situation has crystallized and the border problem has been solved, and internal unrest has decreased; while it is precisely this internal unrest which accounts to a large extent for the failure of revenue to meet budget requirements.†

Hence the solution of the difficulty lies not so much in a precipitate reduction of the army as in the eradication of those

*See "*India at the Cross-roads*," "Army Quarterly" October, 1920.

†In the past year, the loss of central revenue directly attributable to non-co-operation has been estimated at 15 crores: the indirect loss due to unrest generally, through restriction of trade and the reluctance of capital to embark in fresh ventures is incalculable.

root-evils which at once render the present military expenditure unavoidable and our means to meet that expenditure inadequate. On economic grounds no less than on strategical, the abatement of unrest and the solution of the border-problem are alike essential preliminaries to a reorganization of Indian defence on sound and economical lines.

Part III.—Our preparations for future wars.

From the preceding discussion we arrive at the conclusion that the ideal process of evolution is the following:—

- (1) The abatement of unrest, concurrent with:—
- (2) A solution of the border-problem.
- (3) Dependent on, and subsequent to, the above, the utilization of our period of grace from major wars for:—
 - (a) The reorganization of Indian defence on a basis which will permit of immediate retrenchment whilst affording facilities for large expansion in case of a major war in the future.
 - (b) The economic development of India.

(1). *The abatement of unrest.*

Indian unrest, as a symptom of the world-wide spirit of self-determination due to the reflex of the war, can be allayed most readily by our present policy—that of sympathetic and progressive recognition of India's legitimate aspirations in so far as these are consistent with the national safety. Responsibility breeds moderation; and we can fairly hope that with increasing responsibility will be born a sense of true Indian nationalism in its wider aspect—a nationalism which will appreciate the benefits that accrue from continued participation in the British Commonwealth and which will view the problem of defence with a saner and more instructed outlook. At best, however, this educational cure must be a slow and laborious process; while now, unfortunately, the cure is wholly counteracted by the poison which the professional sedition-monger sedulously administers to the body politic. It is of course no part of the soldier's duty to attempt to influence the policy of Government in coping with sedition. But

the lesson to be learnt from the contrasted course of recent events in Ireland and South Africa need not be laboured: a policy of some kind or other there must be.

In any case, though it is our declared intention to make of India a self-governing Dominion voluntarily co-operating with the other free nations of the Empire for the common good, the hard fact still remains that the retention of India, voluntary or involuntary, is a necessity vital to the Empire: a fact fully realized by Australia with her white population of five and a half millions face to face with a thousand million Asiatics. Hence, come what may, India will remain within the Empire; a conclusion which, if its truth were universally recognized, would go far to discourage sedition.

(2). *The border-problem.*

The present situation on the North West Frontier is directly attributable to the "Curzon" policy of non-interference inaugurated in 1898. The success or failure of this policy must be judged by results.* Since 1898, subsidies have only bred fresh subsidies: and repeated expeditions entailing heavy expenditure and casualties have been unavoidable. Further, that the situation shews no signs of present improvement the attitude of the tribes in the 3rd Afghan war and the recent history of Waziristan alike go to prove; while, south of the Kabul River, raiding is still rife everywhere. As an business proposition, then, the policy must be said definitely to have failed.

Now, in its purely military aspect, the border-problem presents no insuperable difficulties. The source of tribal unrest is primarily economic; while the tribes rely against us mainly on the difficulties of their country, and on their safe line of retreat into Afghanistan in emergency. Hence, if roads and railways could be built and our troops could permanently occupy strategic points whence they could threaten the tribesmen *from the rear* and strike on the first hint of trouble, not only should we have removed the source of unrest by providing a living wage for honest work, but at the same time we should have deprived the tribes of

* For a detailed discussion see the Chief Commissioner of the N. W. F. Province's Despatch of August, 1919.

their two chief weapons against us. And, as their stake in the country grew, so would their reluctance to run any risk of losing it. In all human probability, therefore, it would ultimately be possible to hold this territory with greatly reduced forces. But, while every soldier whose business it is to study the frontier doubtless knows the roads and railways to be built and the strategic points to be occupied, and though the advantages which would accrue therefrom can hardly be gainsaid, the present situation must be indefinitely prolonged because the necessary funds are not forthcoming from revenue to rectify it. To meet this difficulty, then, the following proposal is put forward for consideration. An estimate should be made of the total initial cost of a permanent settlement of the border on the above lines, the estimate to include the cost of military operations and of roads, railways, and building; and a loan should then be raised, thus capitalizing the cost. Now a loan to be financially justifiable must offer returns either direct or indirect; what returns have we here to offer?

During the past five years, military operations on the border have cost us enormous sums, and we are no nearer a settlement: the additional lump-sum for the scheme we suggest would amount to perhaps 50 per cent. of the past five years' expenditure—with the certainty of a very large and *permanent* annual saving for the future. The indirect returns are patent enough surely; and we believe that a large section of the Indian public would fully sympathize with the object of such a loan and would support it.

(3). *Proposals for ultimate reorganization.*

We shall now make two bold assumptions, *viz*: that the internal situation has so improved and the border become so stabilized that large military reorganization and retrenchment have become feasible. What lines, then, should this reorganization take? We suggest the following:—

- (i) Reduction of the regular army.
- (ii). Expansion of the Territorial Force.
- (iii) Extensive Indianization of the officer-cadres of both regular army and Territorial Force, accompanied by dilution with British N. C. O.s.

(iv) Improvement of equipment.

(i). *Reorganization of the regular army.*

The immediate results of the assumptions which we make above are these : internal security, and covering, troops can be largely reduced ; and we can be content with a considerably less degree of preparedness in our field army.* The redistribution of our regular forces might then be as follows :—

- (a) *Covering Force.*—To consist of a comparatively small but highly specialized body of troops equipped with all the latest mechanical appliances of proved value ; the force to be maintained at a peace establishment equal to its war establishment and first reinforcement.
- (b) *Field Army.* — To consist of 2 divisions of regular troops plus the Territorial Army.
- (c) *Internal Security Troops.*—To be reduced as far as the internal situation permits ; their place being taken by a reorganized and efficient civil police.

All regular troops, *except* those of the Governing Force, should be reorganized on the European peace-basis, whereby units complete to war establishment with reservists on mobilization. At present the adoption of this vastly more economical system is impossible owing to the need for immediate preparedness, and to the unsettled state of India.

(ii) *Expansion of the Territorial Force.*

This force is cheap ; and, on the analogy of the home organization before the war, we may expect it to expand to a strength of at least six divisions. All other considerations apart, this expansion is a political necessity—if we are to meet the legitimate demand of nationalist India to be fitted for self-defence. The force must receive sufficient training to enable it to take the field in two months from mobilization, and must be enrolled for

* Because, if the independent tribes are settled and disarmed, the enemy in event of a war to the North will be proportionately further off at the outset, and will have to fight his way through difficult country against the opposition of our covering troops deployed on, or near, the Durand Line.

general service. Training and divisional organization might well follow the system of Military Districts adopted by the Citizen Forces in Australia. A beginning should be made at once with specialist units, above all mechanical transport ; for on general mobilization, the demand, for trained mechanical transport drivers, etc., will be enormous.

(iii) Indianization and Dilution.

Indianization, within certain wide limits, is a political necessity; and in time a supply of efficient Indian cadets will, we hope, be forthcoming from the Indian Sandhurst. The *raison d'être* of the Viceroy's commissioned officer will then have largely disappeared. It is suggested, therefore, that his place in the regular army should then be taken by the British N. C. O. In favour of this highly iconoclastic proposal the following points are urged. All history goes to prove the superiority of the *average* white man as a leader ; and, in the late war, the remarkable fighting value of the German askari in East Africa, the success of the French colonial troops in France,* and the enhanced efficiency of our Indian battalions in Allenby's final offensive, all were largely due to extensive dilution with white N. C. O. s. In future wars such N. C. O. s. would be worth their weight in gold as leaders generally, and as machine-gunners in particular ; and, further, would be quite invaluable as a potential reserve of officers with Indian training. In peace they would act primarily as instructors : the system worked admirably for many years in John Company's army, and works equally well to-day in Ammunition Columns and Sapper and Miner units. Candidates for the cadre would of course, have to be selected with the greatest care ; but, with this proviso, British and Indian should work together on the best of terms.

Turning now to the Territorial Force, we can fairly expect that, granted good instructors, the rank and file will become reasonably efficient in the near future. But no Territorial officer-class exists such as is to be found at home. Therefore, here again, the difficulty should be met by the institution of an adequate permanent cadre of British N. C. O. instructors to ensure sound

* A success so great that one-third of the post-war French army stationed in all theatres, including France, is to consist of Moslem North Africans.

instruction in peace and vigorous handling in war. This dilution is the more important as higher territorial formations will not contain the normal stiffening of British units. In addition, a regular commanding officer and adjutant must be seconded to each territorial unit for some time to come. But, apart from these two officers, it is recommended that all officers in the Territorial Force should hold Viceroy's commissions, on the analogy of the system in vogue in the Citizen Forces of Australia. These Viceroy's commissions should be given largely to suitable Indian ~~ex~~-soldiers of the regular army on their joining the Territorial Force; for it is most desirable to keep a field of promotion open to the present type of Indian officer.

Finally, in regard to Territorial Commands and Staffs, we shall have to rely for many years to come on officers seconded from the regular army, and on the Reserve of officers, which latter is now being placed on a sound basis.

(iv) Improvement of Equipment.

Changes in organization having been thus briefly discussed, there still remains the question of equipment to be considered. Obviously, if we are to reduce our regular army to the extent above indicated, we must compensate as far as possible for loss of man-power by extended use of mechanical appliances. And proposed innovations should be thoroughly tested under local conditions before they are accepted. The formation of an Indian "experimental brigade" is, therefore, most desirable.

There is a school of thought, however, which goes much further than mere improvements in equipment: it advances the attractive theory that the burden of our military commitments in sundry quarters of the globe can be enormously reduced by handing over to the Air Force and the Tank Corps the duties now carried out by the soldier.

(a) Aircraft.

The aircraft enthusiast bases his arguments in general on the results achieved by aircraft in the late war, but quotes in particular the dramatic extinction of the Mad Mullah in Somaliland in 1919. It is noteworthy that less copy has been made of subsequent

incidents on the North West Frontier—such as the bombing of Kaniguram for instance. Now, in the late war, at least in France in the later stages, aircraft were available in almost unlimited quantities and objectives against which to employ them were never lacking; while the extinction of the Mullah in 1919 was due firstly to the fact that he was so totally ignorant of aircraft as to occupy a regular bomb-trap of a fort, and secondly to the co-operation of mobile columns who finished him off once and for all—before he had had a chance of profiting by his lesson.

Acting alone, aircraft can influence the military situation only by their own offensive action—that is, by bombing and machine-gunning.* Now, even if we admit the expediency of indiscriminate bombing, it is clear that we must have an objective to bomb: and here we must remember that our most likely future enemies are neither highly organized, nor—like the Mullah—ignorant of aircraft. Further, we must have enough aircraft to do the job properly—it is so easy to forget the limitations of a squadron. To take as a typical instance a squadron of 2-seater reconnaissance and fighting machines such as are now in general use: the squadron has twelve machines; but under Indian conditions if we have eight of these machines simultaneously in action we are doing remarkably well. Each machine normally carries 250 lbs. of bombs and 1500 rounds of S. A. A. Therefore, allowing eight machines two flights a day—which is highly optimistic—we have a total of 4000 lbs. of bombs and 24,000 rounds of S. A. A. expendable by the squadron daily: approximately the weight of metal of a company of infantry and a section of 6" howitzers—ignoring the fact that fire from the air must be infinitely less effective than fire from the ground. Hence it must be admitted that, if aircraft are to *replace* our land-forces, we shall require them in considerable quantities. But the flying-life of a machine of the type we are considering is only 1000 hours,† and each machine costs £ 2,500; so shall we ever get enough of them, and—if we do—where is the

* Since the use of gas is absolutely precluded by our signature of the "Treatyto prevent use in war of Noxious gas and Chemicals", (Washington 1921).

† In France in 1918 the wastage in aircraft from *fair wear and tear* was 51 per cent a month,

economy ? The conclusion is that, while aircraft are invaluable in their legitimate role as adjuncts to our land-forces, they are quite incapable of replacing them.

(b) Tanks.

The day may come when Colonel Fuller's dreams materialize, but that day is not yet. The mechanical limitations of the tank—and more especially of the tropical tank—are still very great. Further, when we consider the achievements of the tank in the late war, we must remember that, in mountain warfare against a semi-civilized or savage enemy—which is the form that our future operations must so often take—the conditions neither of objective nor of terrain will bear comparison with those existing, say, at Cambrai or at Hamel.

When a mechanically reliable fighting tank is produced, preferably a fast-moving cavalry machine, its utility under Indian conditions will of course be great. Meanwhile, in preparation for future wars against a numerically superior and highly mobile enemy with equipment inferior to our own, we cannot afford too considerable a sacrifice of man-power to obtain protected and concentrated fire-power the sustained mobility of which cannot be guaranteed.

(c) Mechanical Transport.

The attached table in the Appendix serves to emphasize two well-known facts : that the maintenance of a modern army without railway facilities is an impossibility ; and that, if we are to have any radius of action from rail-head, we must rely mainly on mechanical transport.

Further, in order that railhead may keep up with our advance after the outbreak of war, we should in the first instance utilize the superior rate of *light railway* construction. And to do this, the necessary stocks of light railway material must be held at rail-head in peace ; since after mobilization delivery of material cannot fail to be delayed.

Beyond rail-head it is our object to have the maximum radius of action with the minimum road-space. The difficulty of

maintaining trans-frontier roads under 3-ton lorry traffic is an insuperable objection to their extended use.* We come to the conclusion, therefore, that we should rely on 30-cwt. lorries augmented by van convoys for use in special rôles where the superior mobility of the latter is essential.

Now we cannot hope to maintain in peace more than a fraction of the lorries which we shall require in war ; we must depend on civil resources. And it is obviously desirable that India should be self-contained in this respect. Subsidization, of standardized lorries at first appears to be the obvious solution ; but subsidization is an expensive business, and its pre-war results in England were not encouraging. It is suggested that, as an alternative, the import duty on satisfactory types of *English* lorries might be lowered, and arrangements made with the firms in question to standardize spare parts. In addition, the rules for the registration of motor-vehicles should be made more stringent ; so that the civil authorities will always have an up-to-date census of all privately owned motor vehicles in each district to enable them to requisition at short notice.

But, to go further, there is a great opening in India for the carrier, as opposed to the fighting, tank ; for a carrier tank such as the 3-ton pattern now under experiment at home, would be invaluable in a theatre where wheels cannot be used. In Waziristan, for instance, routes in nala-beds could usually be made practicable for carrier tanks merely by removing boulders higher than the track-clearance ; and the advantages to be derived from their use by shortening road-space, lessening vulnerability, and simplifying the evacuation of wounded can hardly be overestimated.

Part IV.—Conclusion.

In the preceding pages some reference to politics and policy has been unavoidable, and it has been necessary to make some, perhaps bold, assumptions. Acting on these assumptions, we have tried to sketch a possible future reorganization of Indian

* In France 100 tons of metal per mile per fortnight were found necessary for the maintenance of roads under continuous heavy-lorry traffic.—Haig's Final Despatch,

defence. We shall now close on a note of warning. In matters of equipment and training by all means let us indulge in the most ruthless western efficiency: but let us remember, too, that the psychology of the East does not change. It is true that the organization of the Indian army to some extent broke down under the stress of the greatest war in history; but, before we wholly cast adrift from old established custom, we should ponder well the value of the assets which we may sacrifice thereby. His family traditions and his *izzat*, the personal touch of his officers and the amenities of the service, these have been the influences which have drawn the best of India's manhood into our ranks. If we voluntarily sacrifice these influences—verily is not our epitaph already written for us?

“And the end of the fight is a tombstone white,
With the name of the late deceased,
And the epitaph drear: ‘A fool lies here
Who tried to hustle the East’.”

APPENDIX I.

Table to Illustrate the Relative Efficiency of Railway, Mechanical and Animal Transport as a means of maintaining an Army.

NOTES :—(i) The figures are approximate only.

(ii) The force to be maintained is taken as 4 Divisions, for which the daily lift required is 900 Tons in the scale.—

Men	...	...	Full rations.
Animals	...	...	Half "
Ammunition	...	...	One-eighth echelon.

R. E. stores in proportion.

TYPE.	NO. REQUIRED TO LIFT 900 TONS.	DAILY RADIUS. (Miles).	ROAD SPACE (Miles).	REMARKS.
(1). Broad Gauge Trains. ...	1 ...	—	—	Rate of construction beyond rail-head, 1 mile per day. (maximum).
(2). Light Railway Trains. ...	3 ...	—	—	Rate of construction beyond rail-head, 2 miles per day.
(3). 3-ton Lorries ...	300 ...	30	6	The passage of 50 heavy Lorries completely destroys even a good unmetalled road.
(4) 3-Cwt. Lorries (pneumatic cord tyres). ...	600 ...	40	16	A section of good unmetalled road will carry this traffic for a week.
(5). Ford Vans ...	2,500 ...	50	42	Length of column excessive. Useful load small. Very extravagant in personnel, petrol, etc But largely independent of roads in normal country.
(6) A. T. Carts....	3,150 ...	†10	13	^a Thus, if the force is operating more than 10 miles from railhead, a second complete echelon of carts is required, and so on. If the round trip is impracticable at any stage, the number of carts working on that stage must be doubled.
(7) Camels ...	45,000 ...	10	63	The same remarks apply as double banked) in (6) above.
		126. (single file).		In addition, each stage added to the line reduces the useful load of camels working in the preceding stages, and increases the numbers required proportionately.

LECTURE BY THE
HON'BLE SIR SYDNEY CROOKSHANK,
late Director General of Transportation B. E. F.,

ON

"TRANSPORTATION WITH THE B. E. F."

*Lieut.-General Sir C. W. JACOB, K.C.B., K.C.M.G., Chief of the
General Staff, presiding.*

MY audience will no doubt realise that the subject of my lecture this afternoon on "Transportation with the B.E.F.", comprising as it does—

- (1) Organisation and administration,
- (2) Cross Channel Services,
- (3) Port Construction,
- (4) Dock working,
- (5) Inland water transport and traffic,
- (6) Standard and metre-guage lines and railway traffic,
- (7) Light railways,
- (8) Ropeways,
- (9) Roads and road transport,
- (10) Workshops,
- (11) Stores,
- (12) Accounting and Statistics,

is not only so vast, but also so replete with technical detail that it were impossible to deal with it at length in the short space of time at my disposal. I propose therefore to give only a brief descriptive review of the operations of the D. G. T. organisation in France.

PLATE I.

EL

T

STBERTH.

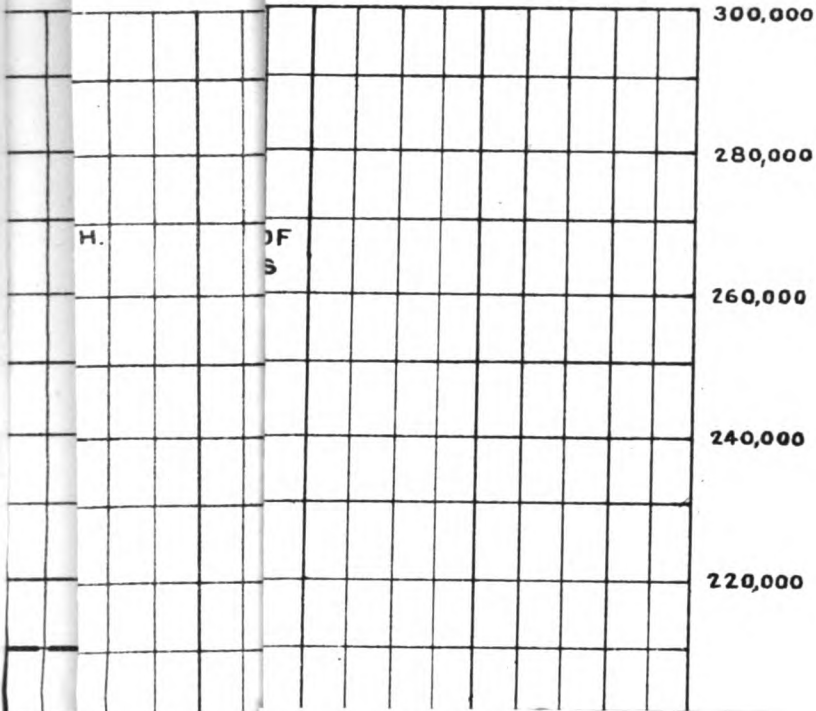
FERRY.

MERS 1. 2 &

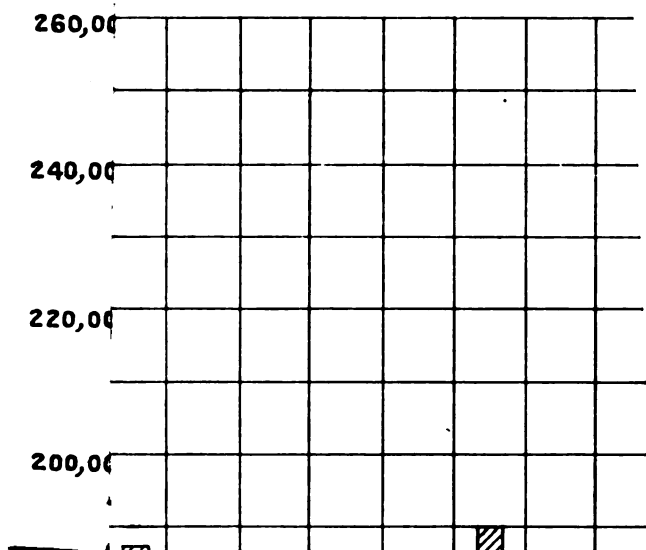
90

100 FEET.

PLATE III.

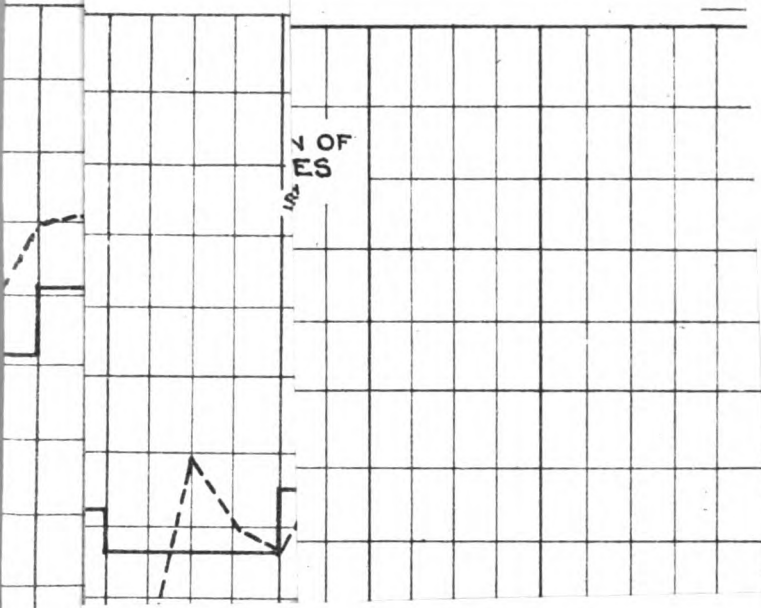


SED BETWEEN TRAFFICS

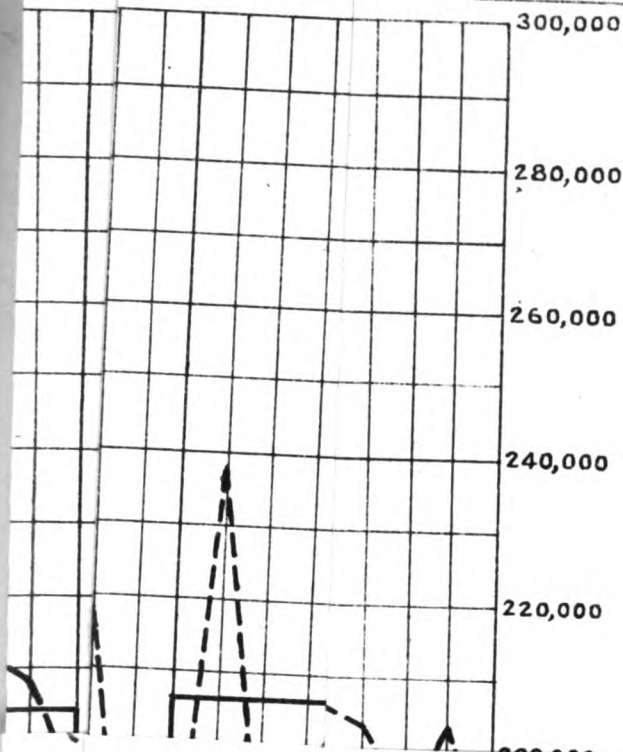


1 OF
ES

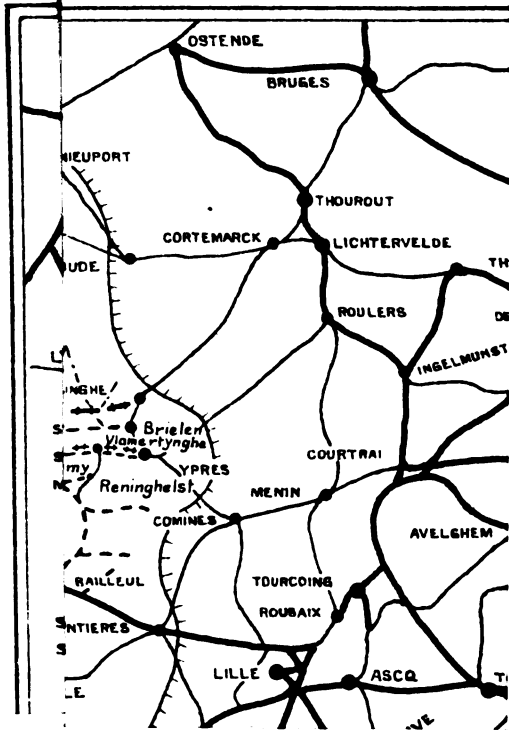
100





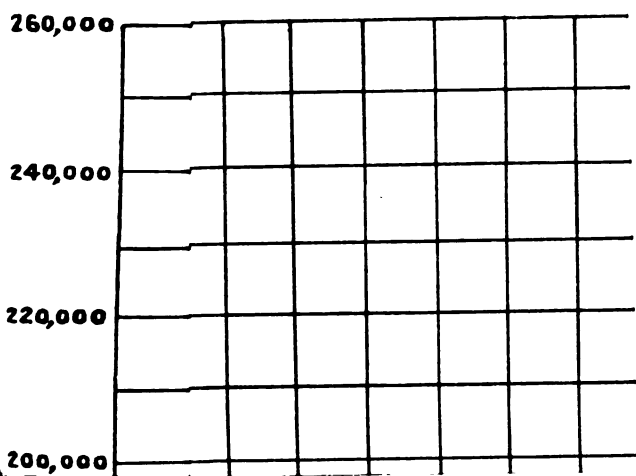


A



ATION OF
TILITIES

OV. IITH



T

IF

A

PLATE X.

N

(4

L

TEE

IPM

ATI

2. In order to assist me in doing so, I would, at the expense of being sentimental, ask those present here who were with the B. E. F. to take themselves back for the time to France and bring to mind those $4\frac{1}{2}$ years of relentless and intensive warfare, and those of you who were not so fortunate as to have had the opportunity of service with the B. E. F., to try and realise the severity of the conditions which obtained, and the onerous difficulties encountered in that hard-fought struggle.

Picture to yourselves the cold winds, rain, snow, and damp of the winter in Flanders, and the strenuous nature of the fighting under winter and summer conditions all along the British front throughout the whole period of the war. The strain on the troops engaged was no doubt relieved by many pleasant instances and happy recollections of rest billets in the land of France, sunny as France can be, but although relief was possible to a certain extent for the fighting troops, there was little or no rest for the Transportation troops under the Director-General of Transportation.

3. They had firstly to make up for lost time in building up the immediate transportation requirements of the army. They then had to keep pace with the rapidly increasing numbers and the enormous amount of materials which were being poured into France and sent up to the front. Following this there came the period of intense pressure by which the enemy's line of resistance was eventually smashed, and finally, the severest test of all on transportation, the organisation for the advance of practically the entire British army over the devastated zone from 30 to 50 miles deep (Arras to Mons) along the whole front which had been scientifically and systematically demolished by an enemy who understood demolition and devastation to a nicety, and carried it out with the painstaking practice for which he had a justly high reputation. For the transportation troops this meant ceaseless work under high pressure and under great difficulties and discomfort. This was especially the case with the Light Railway men whose duties lay almost entirely within the shelled areas. Thus the Tractor Driver had to take up ammunition or supplies to his

batteries or battalions on many a wild winter night, in inky darkness, under a heavy bombardment, over a road which had been trampled under foot into the mud. Their work was exceptionally heavy and extremely well carried out.

Other services like the Broad Gauge Construction and operation Roads and Quarrying, Docks and Inland Water Transport, Port Construction, Stores and Workshops, all had heavy leeway to make up and their task was fully cut out. Their splendid record was shared with the Labour Corps of various nationalities.

4. I must, however, now proceed with the subject-matter of my lecture. I think I am safe in saying, and I speak from personal experience, as a Divisional C. R. E. at High Wood and Corps C. E. at Bouchavesnes, that in 1916 on the Somme the British Army was practically immobile. As you know, the pre-war arrangements for the B. E. F. in France were that with the exception, of course, of their own wheeled and motor road transport and of a quota of R. T. O.'s, the traffic requirements of the British Army would be provided for by the French. It was very early seen that the French Railways and French roads were not capable of maintaining the stress of war which was put on them, and little by little arrangements were being made by the Quartermaster General's Department and the Royal Engineer Services to assist in Railway construction and traffic and in road repairs and quarrying. In spite of the strenuous endeavours of stalwarts like Colonels Freeland, Murray and Waghorn, the progress made was, owing to lack of supplies and administrative difficulties due to inexperience of warfare on this scale, wholly insufficient, and conditions were rapidly going from bad to worse. By the year 1916, the British Railway Companies had, however, commenced to carry out purely British Army works on a limited scale, but the transportation position on the railways and on the roads in the Somme forward areas was altogether inadequate, and it is probable that, had the Germans fallen back after the big British attack in September 1916, as they did in the early part of 1917, effective battle pursuit could not have been given. Light Railways were in their infancy and only sufficient for purely local purposes.

5. Realising the position and foreseeing the difficulties that great leader, Sir Douglas Haig, had called in Sir Eric Geddes to investigate the transportation situation at large. The result was that the Director-General of Transportation's organisation was formed as a separate entity towards the end of the year 1916. I daresay quite a number of you in my audience are asking themselves what exactly is a D. G. T. and what are his functions? He is not referred to in F. S. R., and where does he come into the military machinery? Why not have the ordinary directorships and departments under the Q. M. G. and let them rip on their own? My reply to all this is that the D. G. T. is to Transportation men, machinery and materials what the Financial Adviser is to funds, and directly it becomes a matter of conservation of technical personnel and plant, and for the matter of that of unskilled labour also, a position which very rapidly arises, then central technical control over the technical directorates and departments becomes necessary in the shape of a Director-General of Transportation. Whether the D. G. T., is under the Q. M. G., or is an independent agency is neither here nor there. The General Staff plan the operations, the Q. M. G. lays down the requirements—the when and the where, the nature and the amount—and the D. G. T. does the collecting and forwarding agency. His *raison d'être* is a scientific combination of the various transportation resources with a minimum utilization of personnel and power. Thus in the case of the B. E. F., to serve as an illustration, it was seen that metre gauge railways and 40 c. m. tramways could be neglected. Docks would have to provide for berths, cranes, quayside railway facilities, transit sheds, electric and gravity runners, overhead conveyors, etc., for a possible 100 per cent., increase of imports. Light Railways, by comparison with the French intensity of 12 to 14 kilometres per kilometre of front, for an 80 mile British front would require to organise for 800 route miles of line. The I. W. T. was to be supplemental to and not in competition with railways, and also in view of the demands for river craft for Mesopotamia it would suffice to limit their activities to 60,000 tons per diem. Railway Traffic had their objective in relieving the French of the whole of the British

Standard Gauge traffic in Northern France, and Roads had their work cut out to do all the new construction and practically all the repairs of the roads in the British zone, finding their own materials plant and machinery. However, to return to my subject, with the B. E. F. in France at any rate, the D. G. T. worked independently of, but hand in glove with, the Q. M. G., and in close co-ordination with the Headquarter Staff and Army Commanders, and with the G. O. C., L. O. C., and his commandants.

6. At its birth the organisation consisted of Sir Eric Geddes as D. G. T., Sir Phillip Nash as Deputy D. G. T., and General Freeland and myself as the forward area Deputies. Subsequently, Sir Eric went to the Admiralty, Sir Phillip to Paris as Inspector-General of Transportation, and General Freeland to Mesopotamia and India. Directorates and departments were organised as I have already detailed, and by the spring of 1917 the baby was already a flourishing infant: by the end of the year, when handed over to me with Brigadier Generals Brodie-Henderson, Hildyard and Brough as my Deputies, it had grown to strength and vigorous manhood. In the army areas there were Deputy Assistants to the D. G. T. together with Traffic Officers, and the armies and corps also had light railway and road officers. Traffic demands were made on the Deputy Assistants to the D. G. T., who were in close touch with the D. G. T., H. Q., and the technical directorates. The Forward Deputies prepared schemes, made inspections and gave coordination.

7. I will now briefly discuss the doings of each department of transportation, inflicting you, I fear, with a flood of figures, my excuse being that this is a lecture on a technical subject.

Organisation and Administration.—Seeing that the D. G. T.'s organisation was practically a new and separate branch of the Army which carried out its own recruitment, training and administration, and that at one time the technical personnel against an establishment of 365 units comprising 95,518 skilled troops, amounted to an actual strength of 83,600 technical men, with transport, to which were added 78,890 unskilled labour, making a

matter of 162,500 men under the control of the Director-General of Transportation, it will be seen that the demands on this department were very heavy. But mere numbers do not cover everything in dealing with the immensity of the transportation problems of the B. E. F., and never at any time during its $2\frac{1}{2}$ years career did the D. G. T. possess a sufficiency of technical personnel. What our administration aimed at was to get and maintain a minimum output from every unit, whether man or machine. These demands were, at the beginning, successfully dealt with by General Hardinge-Newman and later on by General Charteris, whose well-known pushfulness and zeal met with every success. This department, working in with the special depot in England at Longmore, dealt with the D. G. T. personnel from the time of recruitment until the time of demobilisation. It was in touch with, but independent of, the Accountant-General's branch, this being necessary because of the large number of technical men of various trades which were required in the different branches. The trades enlisted were in many cases quite outside the ordinary recognised trades for Royal Engineer Services, and it serves to illustrate the variety of trades to tell you of the diver recruit who, on reporting himself in France was joyfully welcomed for underwater work, and on being asked what diving experience he had, stated that he was employed in that capacity at the Carlton Hotel. It transpired that he was the gentleman who dived for spoons and forks in the plate wash tub of that famous hotel restaurant.

The doings of the organisation branch of the Director-General of Transportation are a lecture in themselves, as they comprise the organisation of an entirely new branch of the army from its inception, and the development and maintenance of the same until the close of the operations, when D. G. T. was amalgamated with the Quartermaster-General's services. With the exception of the overseas railway troops all transportation troops were enlisted in the Corps of Royal Engineers.

8. *Cross Channel Services*.—The Naval Transport Service was represented at the D. G. T.'s headquarters by the Principal Naval

Transport Officer, who with his Royal Navy district officers at the ports worked in with the D. G. T. Docks Directorate, with whom were also associated the Directorate of Inland Waters and Docks on the other side of the Channel. The features of the Cross Channel Service were the Cross Channel Barges and the Train Ferries.

The former was based on Richboro and the Thames, and went up into the Canals on our side to the inland ports and depots. The Cross Channel Barge Service, which in October 1918 was handling a traffic of 25,000 tons a week, was also most useful in importing and evacuating stores and materials and was invaluable in releasing shipping.

The train Ferry Service commenced in February 1918 with three vessels intended to ply between Southampton and Richboro and Dunkirk, Calais and Dieppe. A fourth ferry boat was later on purchased from an American Lake Service for the Southampton Cherbourg Service, but was found to be too top heavy for sea traffic, and was never usefully put into service. The advent of the Train Ferry Service made a marked advance in Cross Channel transportation facilities in dealing with certain traffics. Each ferry was designed to take 52 standard guage 10 ton unit wagons, and the tying up and off-loading was completed in a matter of 15 minutes. Plates I and II illustrate the loading and running off arrangements of the Train Ferry Vessels.

British wagons to loading guage were thus run from collecting centres at Home at depots in France without unloading, the advantages of which in handling aeroplane parts and fragile stores, cranes, road rollers, artillery and transport may well be imagined. But the gteatest value of the service was in bringing over the railway locos and wagons, the tanks on special tank wagons, and the rail-mounted guns. Hitherto, at great trouble and delay, these guns of which there were no less than 84 with the British Army in France, had been landed from ship by crane, whereas now the gun in its travelling position was run abroad in England and run off in France straight to its destination. We were thus able to import

guns like the Japanese 14-inch, weighing a matter of 296 tons and having an overall length of 87 feet without any craning and re-mounting, the difficulties attendant on which were enormous. For instance, just imagine having to handle a 90 ton barrel with our one and only 100 ton crane at the Bombay Dockyard at the end of a narrow jetty with turntable manipulation. The vessels were decked to take mechanical transport wagons or loose horses if so desired. These ferries, which handled a tonnage of about 7,000 tons per week, were, when I left France at this time last year, fully engaged in evacuating British rolling-stock and materials, and I contend that the service more than repaid the cost of the vessels and landing staging. It is possible to visualise very great use for these train ferries in India in Bombay Harbour and on the great inland waterways of Bengal, Assam and Burma. Both the Cross Channel Barge and the Train Ferry Services were run from Home in combination with the D. G. T. organisation.

9. *Port Construction.*—This Department was not called upon to carry out any extensive new works like the Americans had in constructing a new port on the Garonne, but they had a difficult and interesting job in the construction of the landing stages at Dunkirk, Calais, Dieppe and Cherbourg for the train ferry termini. They also undertook the construction of Railway facilities at quay side and carried out hut and workshop construction. After the Germans had evacuated Ostend and Zeebrugge we sent some of our port construction engineers and skilled construction troops to help open up the docks and make a preliminary clean-up preparatory to handing over to the Admiralty and the Belgium authorities.

10. *Dock Working.*—The operations of the Docks Directorate under Brigadier-General Wedgwood, the brother of the well known M. P., were very striking. Plate III gives a graph showing how they worked up to an average import tonnage of 26,000 tons per diem, in the handling of which they used up to 370 cranes, and Plate IV shows the natures and amounts of these in ports. The improvements effected in dock working were very far reaching and we were able to raise the rate of discharge of ships from 12

Transport Officer, who with the ports worked in with the whom were also associated the Docks on the other side of Cross Channel Service were Train Ferries.

The former was based on up into the Canals on our side. The Cross Channel Barge Service handling a traffic of 25,000 to importing and evacuating stores in releasing shipping.

The train Ferry Service of three vessels intended to ply between Dunkirk, Calais and Dieppe purchased from an American firm. The Cherbourg Service, but was for traffic, and was never usefully. The Train Ferry Service made a transportation facilities in the ferry was designed to take 52 seconds and the tying up and off-loading minutes. Plates I and II illustrate arrangements of the Train Ferry.

British wagons to loading centres at Home at depots in France, advantages of which in handling cranes, road rollers, artillery and But the greatest value of the service was in the way of the tank way locos and wagons, the tank rail-mounted guns. Hitherto, the guns of which there were no less than 100 in France, had been landed from the sea in its travelling position was run from France straight to its destination.

FOR many years the land to his Devices.

Things have been it is still with the HAUD or within the Projected that within marching and ty of a visit becomes apparent in the autumn.

As the season approaches the As expense of and relieved the distance of the maritime an almost entire self in a country depend by wards for miles borders of Africa which the eyes of game. In must be removed water. The

the Japanese 14-inch, weighing a matter of eight or ten tons, and a general length of 45 feet without any cranes or hoisting the difficulties attendant on which were common. The cranes, just imagine being to handle a 40-ton barrel with or without only two ton cranes at the Bombay Dockyard at that time, was a feat of human manipulation. The vessels were loaded on cable mechanical transport wagons or horse drawn if it is needed. These cranes, which handled a ton and its cargo of about 1000 tons per week, were, when I left France at the time they were engaged in evacuating British millings, and I learned that the service more than equalled the cost of the vessel and loading staging. It is possible to visualize very good use for these cranes in India in Bombay Harbor and on the great inland waterways of Bengal, Assam and Burma. The Cable Channel Barge and the Tug Boat service were also used there in combination with the D. G. T. organization.

g. Port Construction.—This Department was not called upon to carry out any extensive new works like the Americans but in constructing a new port on the Garonne, but they had a difficult and enormous job in the construction of the landing stage at Marseilles, Genoa, Bugey and Cherbourg for the train ferry service. They also undertook the construction of Railway facilities in many places, not only in the workshop construction, like the Germans but in the construction of the Zebruge, we sent some of our best construction engineers and skilled construction men to help them in the work and make a preliminary design, preparing to building over in the Ministry and the Belgians authorities.

h. Dock Working.—The operations of the Dock Service under the British command, Wood, the brother of the well known M. P., was very striking. Part III gives a graph showing how they worked up to an average export tonnage of 100,000 tons per week, in the handling of which they used up to 250 cranes and Part IV shows the various amounts of these in years. The importance of the dock working were very far reaching and we were able to make the rate of discharge of ships from the

to 34 tons per hour in port with an efficiency of 12 cwts per man per hour, and when, as was often the case, the D. G. T. organisation was scoffed at on the score of expense, one was able to realize that the practical value of these figures applied over a week or so probably more than counterbalanced the whole cost of Geddesburg and its inmates. The ports operated were Dunkirk, Calais and Boulogne in the north, and Dieppe, le Havre and Rouen in the south. Etaples, St. Valery and le Treport were also used to a certain extent. The organisation, handling the cranes, took over the import cargoes from the naval in-board service and passed them into depot, barge or wagon according to circumstances. It made its own arrangements for cranes, conveyors, power and gravity runners, sheds, etc., and supervised the warf labour handling the cargoes. The Docks Directorate also handled the export traffic which averaged 10,000 tons per week. It is interesting to note that the Americans made dock and depot preparations for an import of 100,000 tons per day, but never actually reached that figure.

11. *Inland Water Transport and Traffic.*—The value of this Directorate, which conducted the barge services on the inland water-ways of France and Flanders, was very great. At the end of 1918 the length of waterways operated was 474 miles, and our fleet consisted of 591 barges and 389 tugs, etc, or a total of just on 1,000 craft, and the organisation was to take overside deliveries from ship to inland port, and again to move cargoes from inland depot to the forward areas. The I. W. T. also operated on the Somme up to Amiens and Peronne, and on the Seine into Paris. Private civil canal traffic was controlled by them in coordination with an Inter-allied Committee. This Directorate carried out very successful ambulance services for the evacuation of serious cot-cases from hospitals in the mid areas down to the base hospitals and also moved sick horses for the Veterinary Service and sound horses for remounts in considerable numbers and troops as required. On the Scarpe and Lys river canals the light craft were put to good use in handling materials and also the wounded by water in the

battle areas. The tonnage handled by the I. W. T. in 1918 with a capacity of 130,000 D. W. tons averaged 60,000 tons per week. This Directorate, ably presided over by Brigadier General Luck, late of the Royal Indian Marine, was also of great use in helping the Royal Engineer Services with their bridge construction work, and their assistance generally was much appreciated by the French, Belgians and Americans. They built their own wharfs and quays, and carried out their own repairs. Altogether a highly efficient and most useful branch of Transportation.

12. *Standard and Metre guage lines and Railway Traffic.*—We now come to the construction, telegraph and telephone working, signalling, operation and traffic handling of the main lines. It is quite out of the question for me to deal here with this big subject, but to commence with I will give you in figures some idea of the extent of standard guage line constructed for the B. E. F.

In 1914, 1.5 miles were laid,

In 1915, 104 miles,

In 1916, 417 miles,

In 1917, 814 miles, and

In 1918 and during the first two or three months of 1919, we put down 1,314 miles,

making a total of 2,650 miles of new line. In addition, during 1918 and early 1919, 1,750 miles of track demolished by the retreating Germans were reconstructed, making a grand total in all of 4,400 miles of track opened to traffic.

The rate of construction in 1917 reached the very high figure of $6\frac{1}{2}$ miles of new line per day, that is to say not mere track but formation, bridging, ballasting and track laying complete, and in 1918 we were reconstructing lines at the rate of over 20 miles a day. As an example of the work done by Colonel Lyell, the Chief Railway Construction Engineer, and the British Railway Companies, I may mention that, although Lille was only evacuated by the Germans on the 17th October 1918, they had by the 25th idem reconstructed the line from Bailleul across the trenches of both sides, built a temporary bridge over the Lys River and were

able to run the first supply train for the relief of the civil populace into the city that day, opening a passenger service the following day. We used a certain amount of chaired track picked up from Home lines, but nearly all our lines were laid with a specially rolled 75lb rail which gave great satisfaction.

The bridging operations were on an equally large scale, and 37,000 running feet of single track timber bridging were constructed by the railway troops.

8½ million tons of ballast were procured and laid on the formation, being 3½ times the amount of excavation for the Channel Tunnel from Dover to Marquise.

It may interest you to know that for the big attacks it was found that it was necessary to push forward standard gauge lines at intervals apart of about two miles; thus for the Messines Wynchaete operations on an eight mile front we had temporary forward lines on the Ypres-Roulers, Ooderdom-Dickebusch, Lindenhoch, Douve Valley and Neuve Eglise alignments.

On the traffic and operating side the Railway Operating Division under Colonel Peget worked at one time, 1333 kilometres of line with 1471 of their own locos and 70,346 10-ton unit imported wagons, the average haul being 60 kilometres with 33 Wagon trains. On the metre-gauge we operated up to 62 kilometres of line with 67 locos and 1,200 wagons imported. The minimum weekly average number of B. G. trains worked by the Traffic Department for the British Army (*vide* Plate V) amounted to 287 trains per day, and the personnel carried during August 1918 averaged 3,50,000 all ranks per week. For the evacuation of the sick and wounded, we had in use 40 Ambulance trains and for leave men we ran a dozen rakes of made-up "Noah's Ark" stock.

Troop movements were worked to the scale of one train per three hours at each of three stations, making 24 trains per 24 hours maximum. The capacity of single lines with passing stations about two miles apart was 16 to 24 trains per day each way, according to the terminal facilities. On the Bergues Proven double line which we opened for the Passchendaele operations we

operated up to 56 trains per day each way, but here we experienced great difficulties with sand ballast, as the Flanders slush working into the ballast flooded the sleepers. It will perhaps convey some idea of the traffic handled to state that in the bombardments in the major operations 40 broad guage train loads of ammunition per day were often fired from the gun, which worked out in some cases to $1\frac{1}{2}$ tons of metal per day per yard of front attacked. The all-in allowance for Divisions in the fighting line averaged nearly $2\frac{1}{2}$ trains per Division per day, the pack trains carrying the daily supplies at the rate of two Divisions per train. The big Ammunition Depots were worked entirely by our R. O. D., the lay out of that at Dannes Camiers near Boulogne for instance having a 75,000 tons capacity and 45 miles of B. G. line, and great credit is due to General V. Murray, Colonels Maguiac, Russell and Birney and the Staff of the Traffic Directorate for their successful handling of the heavy traffic of the B. E. F. under very difficult conditions. Plate No. VI shows how we gradually built up our own traffic haulage and Plate No. VII gives the B. E. F. Railway map of Northern France and Flanders.

13. *Light Railways.* But the greatest progress in any branch of transportation was made by the Light Railways Directorate under General Harrison of the Argentine Railways.

In early 1916, although the Germans and French armies were by then working extensive light railways systems along their front, the British Army had only made commencement with a small system operated by Captain Delphine under General Nanton, at St Eloi, alongside of which in my Division, the 47th (London), the foundation of whose great successes in the war, I may mention was due to the training and instruction given in its earlier incarnation by its late Commander, His Excellency, our present Commander-in-Chief in India, we were putting down the Carency, Souchez, Zouave Valley system to feed our front line on the Vimy Ridge. So that General Harrison practically struck out on a new line with a clear field. Beginning in January 1917 with a tonnage carriage of 10,000 tons per week he had, as shown in Plate VIII,

for the Messines operation in July of the same year reached 180,00 tons per week, and by March 1918 the tonnage on Light Railways had amounted to no less than 280,000 tons of all traffic per week. The German offensives of the 21st March and 9th April brought this down to 120,000 tons per week, after which it again fell to the salvage and evacuation level of 40,000 tons per week.

I could yarn quite a lot on Light Railways, but I must content myself with giving a few figures of interest derived from actual experience.

All our Light Railway lines were on the 60 c. m. (1' 11½"), guage and we had no use for the 40 c. m. tramway track extensively used by the French. We had a 20 lbs section by 5 metres rail, but recommended a 25 lbs section to the Americans who adopted it and I understood, found it satisfactory. Besides the 20 lbs rail we imported and supplied 8 and 16 lb track for tramway and R. E. Services. The locos were Baldwin and Hunslet 4.6.0, and America 2.6.2 and the tractors mostly 20 and 40 H. P. Simplex and 45 H. P. Petrol Electric, and all manner of wagons from 10-ton bogies down to 3½ tons open wagons. Even smaller units were used, or obtained for the R. E. Services.

On active fronts we put down an average of 10 kilometres of track per kilometre of front. On less intensive fronts the ratio was as 6 to 1.

Light Railways operated at times over 1,000 route miles of line, and they laid some 3,000 miles of track during the two years of their existence. The rolling-stock on charge was 640 locos, 857 tractors and 5,918 wagons. These figures give a close comparison with those for the whole of the 2'6" and 2'0" guage systems in India taken together.

The traffic on each Light Railway system along our front was controlled from the local headquarters of the Assistant Director of Light Railways with each Army, who kept card index logs of each loco and wagon, controlled the traffic and checked by selector telephone.

2. In order to assist me in doing so, I would, at the expense of being sentimental, ask those present here who were with the B. E. F. to take themselves back for the time to France and bring to mind those $4\frac{1}{2}$ years of relentless and intensive warfare, and those of you who were not so fortunate as to have had the opportunity of service with the B. E. F., to try and realise the severity of the conditions which obtained, and the onerous difficulties encountered in that hard-fought struggle.

Picture to yourselves the cold winds, rain, snow, and damp of the winter in Flanders, and the strenuous nature of the fighting under winter and summer conditions all along the British front throughout the whole period of the war. The strain on the troops engaged was no doubt relieved by many pleasant instances and happy recollections of rest billets in the land of France, sunny as France can be, but although relief was possible to a certain extent for the fighting troops, there was little or no rest for the Transportation troops under the Director-General of Transportation.

3. They had firstly to make up for lost time in building up the immediate transportation requirements of the army. They then had to keep pace with the rapidly increasing numbers and the enormous amount of materials which were being poured into France and sent up to the front. Following this there came the period of intense pressure by which the enemy's line of resistance was eventually smashed, and finally, the severest test of all on transportation, the organisation for the advance of practically the entire British army over the devastated zone from 30 to 50 miles deep (Arras to Mons) along the whole front which had been scientifically and systematically demolished by an enemy who understood demolition and devastation to a nicety, and carried it out with the painstaking practice for which he had a justly high reputation. For the transportation troops this meant ceaseless work under high pressure and under great difficulties and discomfort. This was especially the case with the Light Railway men whose duties lay almost entirely within the shelled areas. Thus the Tractor Driver had to take up ammunition or supplies to his

batteries or battalions on many a wild winter night, in inky darkness, under a heavy bombardment, over a road which had been trampled under foot into the mud. Their work was exceptionally heavy and extremely well carried out.

Other services like the Broad Gauge Construction and operation Roads and Quarrying, Docks and Inland Water Transport, Port Construction, Stores and Workshops, all had heavy leeway to make up and their task was fully cut out. Their splendid record was shared with the Labour Corps of various nationalities.

4. I must, however, now proceed with the subject-matter of my lecture. I think I am safe in saying, and I speak from personal experience, as a Divisional C. R. E. at High Wood and Corps C. E. at Bouchavesnes, that in 1916 on the Somme the British Army was practically immobile. As you know, the pre-war arrangements for the B. E. F. in France were that with the exception, of course, of their own wheeled and motor road transport and of a quota of R. T. O.'s, the traffic requirements of the British Army would be provided for by the French. It was very early seen that the French Railways and French roads were not capable of maintaining the stress of war which was put on them, and little by little arrangements were being made by the Quartermaster General's Department and the Royal Engineer Services to assist in Railway construction and traffic and in road repairs and quarrying. In spite of the strenuous endeavours of stalwarts like Colonels Freeland, Murray and Waghorn, the progress made was, owing to lack of supplies and administrative difficulties due to inexperience of warfare on this scale, wholly insufficient, and conditions were rapidly going from bad to worse. By the year 1916, the British Railway Companies had, however, commenced to carry out purely British Army works on a limited scale, but the transportation position on the railways and on the roads in the Somme forward areas was altogether inadequate, and it is probable that, had the Germans fallen back after the big British attack in September 1916, as they did in the early part of 1917, effective battle pursuit could not have been given. Light Railways were in their infancy and only sufficient for purely local purposes.

construction, that is to say, the sleepers and 3-inch beech planks laid in timber roads, would have made a 9-feet wide road 374 miles long.

The Director of Roads obtained altogether 166,600 tons of granite from the Channel Islands, and 216,000 tons of slag from Middlesborough, before shipping difficulties prevented further importation of those valuable road metals. He took three million tons of stone from the Marquise quarries, a fine performance on the part of the Quarry companies and German prisoners, and at the rate of 4,750 tons per week from the quarries in the south.

At times we used to take 20 full trains-load of stone from Marquise every day, and even then we were not able fully to satisfy the requirements. For transport, supplied on daily requisition, we had 1,066 lorries, mostly of the 5-ton Steam Foden Tip type which were found to be particularly useful. We also had a matter of 930 special American dump carts for distribution of metal along the road. This is a very handy material cart having a drop floor and a good lock. The tarring operations which were carried out during the summer months gave a splendid travelling surface, and practically did away with the dust nuisance on the main roads, on advance road, under distant observation and long range fire; and in and around hospitals and depots. Practically the whole of the road *personnel* was obtained from England, and when one comes to think what a Herculean task it was to maintain the existing roads and to make roads through the mud of Flanders and across trench zones, one can understand the difficulties which this Directorate had to contend with, and appreciate the success which they obtained. Towards the end of the war the D. G. T. Roads Directorate was maintaining a total length of 4,412 miles of road.

16. *Workshops.*—Beside departmental local shops for running repairs we had main workshops at Andruicq (near Calais), Rang du Fliers and at St. Etienne (near Rouen) which latter shops were ably managed by Colonel Cole, now Secretary to the Indian Railway Board, for main line stock, and at Berguette and later

Standard Gauge traffic in Northern France, and Roads had their work cut out to do all the new construction and practically all the repairs of the roads in the British zone, finding their own materials plant and machinery. However, to return to my subject, with the B. E. F. in France at any rate, the D. G. T. worked independently of, but hand in glove with, the Q. M. G., and in close co-ordination with the Headquarter Staff and Army Commanders, and with the G. O. C., L. O. C., and his commandants.

6. At its birth the organisation consisted of Sir Eric Geddes as D. G. T., Sir Phillip Nash as Deputy D. G. T., and General Freeland and myself as the forward area Deputies. Subsequently, Sir Eric went to the Admiralty, Sir Phillip to Paris as Inspector-General of Transportation, and General Freeland to Mesopotamia and India. Directorates and departments were organised as I have already detailed, and by the spring of 1917 the baby was already a flourishing infant; by the end of the year, when handed over to me with Brigadier Generals Brodie-Henderson, Hildyard and Brough as my Deputies, it had grown to strength and vigorous manhood. In the army areas there were Deputy Assistants to the D. G. T. together with Traffic Officers, and the armies and corps also had light railway and road officers. Traffic demands were made on the Deputy Assistants to the D. G. T., who were in close touch with the D. G. T., H. Q., and the technical directorates. The Forward Deputies prepared schemes, made inspections and gave coordination.

7. I will now briefly discuss the doings of each department of transportation, inflicting you, I fear, with a flood of figures, my excuse being that this is a lecture on a technical subject.

Organisation and Administration.—Seeing that the D. G. T.'s organisation was practically a new and separate branch of the Army which carried out its own recruitment, training and administration, and that at one time the technical personnel against an establishment of 365 units comprising 95,518 skilled troops, amounted to an actual strength of 83,600 technical men, with transport, to which were added 78,890 unskilled labour, making a

matter of 162,500 men under the control of the Director-General of Transportation, it will be seen that the demands on this department were very heavy. But mere numbers do not cover everything in dealing with the immensity of the transportation problems of the B. E. F., and never at any time during its $2\frac{1}{2}$ years career did the D. G. T. possess a sufficiency of technical personnel. What our administration aimed at was to get and maintain a minimum output from every unit, whether man or machine. These demands were, at the beginning, successfully dealt with by General Hardinge-Newman and later on by General Charteris, whose well-known pushfulness and zeal met with every success. This department, working in with the special depot in England at Longmore, dealt with the D. G. T. personnel from the time of recruitment until the time of demobilisation. It was in touch with, but independent of, the Accountant-General's branch, this being necessary because of the large number of technical men of various trades which were required in the different branches. The trades enlisted were in many cases quite outside the ordinary recognised trades for Royal Engineer Services, and it serves to illustrate the variety of trades to tell you of the diver recruit who, on reporting himself in France was joyfully welcomed for underwater work, and on being asked what diving experience he had, stated that he was employed in that capacity at the Carlton Hotel. It transpired that he was the gentleman who dived for spoons and forks in the plate wash tub of that famous hotel restaurant.

The doings of the organisation branch of the Director-General of Transportation are a lecture in themselves, as they comprise the organisation of an entirely new branch of the army from its inception, and the development and maintenance of the same until the close of the operations, when D. G. T. was amalgamated with the Quartermaster-General's services. With the exception of the overseas railway troops all transportation troops were enlisted in the Corps of Royal Engineers.

8. *Cross Channel Services*.—The Naval Transport Service was represented at the D. G. T.'s headquarters by the Principal Naval

Transport Officer, who with his Royal Navy district officers at the ports worked in with the D. G. T. Docks Directorate, with whom were also associated the Directorate of Inland Waters and Docks on the other side of the Channel. The features of the Cross Channel Service were the Cross Channel Barges and the Train Ferries.

The former was based on Richboro and the Thames, and went up into the Canals on our side to the inland ports and depots. The Cross Channel Barge Service, which in October 1918 was handling a traffic of 25,000 tons a week, was also most useful in importing and evacuating stores and materials and was invaluable in releasing shipping.

The train Ferry Service commenced in February 1918 with three vessels intended to ply between Southampton and Richboro and Dunkirk, Calais and Dieppe. A fourth ferry boat was later on purchased from an American Lake Service for the Southampton Cherbourg Service, but was found to be too top heavy for sea traffic, and was never usefully put into service. The advent of the Train Ferry Service made a marked advance in Cross Channel transportation facilities in dealing with certain traffics. Each ferry was designed to take 52 standard guage 10 ton unit wagons, and the tying up and off-loading was completed in a matter of 15 minutes. Plates I and II illustrate the loading and running off arrangements of the Train Ferry Vessels.

British wagons to loading guage were thus run from collecting centres at Home at depots in France without unloading, the advantages of which in handling aeroplane parts and fragile stores, cranes, road rollers, artillery and transport may well be imagined. But the gteatest value of the service was in bringing over the railway locos and wagons, the tanks on special tank wagons, and the rail-mounted guns. Hitherto, at great trouble and delay, these guns of which there were no less than 84 with the British Army in France, had been landed from ship by crane, whereas now the gun in its travelling position was run abroad in England and run off in France straight to its destination. We were thus able to import

engines, and helped as far as possible in their power. But the heaviest strain fell on the French Railway organisation, who had made the mistake, which we did ourselves in the earlier days, to send too many of their younger technical men into the firing line, consequently their railway men soon became worked out and it was only due to the pushfulness and resource of their transportation Chiefs, Colonels Payot and Boquet, and men like Colonel Dumont and Monsieur Javary of the Nord Railway, that they were able to carry on. Their wagon control was unfortunately very weak and our efforts to induce them to organise it on sound lines in co-ordination with our R.O.D. wagon control were unavailing. Consequently there was considerable wagon wastage and great difficulty in adjusting the traffic requirements at the different centres. However all is well that ends well.

21. The D. G. T. Organisation was subjected to non-professional criticism in connection with its arrangements for following up the general advance in the latter part of 1918, but the layman cannot possibly conceive the enormous difficulties which confronted transportation at this stage and throughout the winter of 1918-19. The men, mostly of advanced years, the glamour gone and peace in sight were absolutely worn out, and they wanted to return to their families and civil occupation. The demands were exceptionally heavy, and it was only with the greatest difficulty by ruthlessly shutting down Light Railways and other services, and sacrificing everything to the construction of roads and main lines and handling the traffic, that we were able to carry on at all.

22. My request to the General Headquarters that only contact and Police troops should be pushed forward over the devastated zone was deemed impracticable and the best part of five British armies and the cavalry took up the advance into Belgium. As may be imagined, the transportation position became acute, but we have this to our credit that I believe only on few occasions did the advance troops find it necessary to requisition on the country side for supplies. The French on our right and following in our wake under more favourable conditions, progressed but

to 34 tons per hour in port with an efficiency of 12 cwts per man per hour, and when, as was often the case, the D. G. T. organisation was scoffed at on the score of expense, one was able to realize that the practical value of these figures applied over a week or so probably more than counterbalanced the whole cost of Geddesburg and its inmates. The ports operated were Dunkirk, Calais and Boulogne in the north, and Dieppe, le Havre and Rouen in the south. Etaples, St. Valery and le Treport were also used to a certain extent. The organisation, handling the cranes, took over the import cargoes from the naval in-board service and passed them into depot, barge or wagon according to circumstances. It made its own arrangements for cranes, conveyors, power and gravity runners, sheds etc., and supervised the warf labour handling the cargoes. The Docks Directorate also handled the export traffic which averaged 10,000 tons per week. It is interesting to note that the Americans made dock and depot preparations for an import of 100,000 tons per day, but never actually reached that figure.

11. *Inland Water Transport and Traffic.*—The value of this Directorate, which conducted the barge services on the inland water-ways of France and Flanders, was very great. At the end of 1918 the length of waterways operated was 474 miles, and our fleet consisted of 591 barges and 389 tugs, etc, or a total of just on 1,000 craft, and the organisation was to take overside deliveries from ship to inland port, and again to move cargoes from inland depot to the forward areas. The I. W. T. also operated on the Somme up to Amiens and Peronne, and on the Seine into Paris. Private civil canal traffic was controlled by them in coordination with an Inter-allied Committee. This Directorate carried out very successful ambulance services for the evacuation of serious cot-cases from hospitals in the mid areas down to the base hospitals and also moved sick horses for the Veterinary Service and sound horses for remounts in considerable numbers and troops as required. On the Scarpe and Lys river canals the light craft were put to good use in handling materials and also the wounded by water in the

maintained by Rhine barges via Rotterdam, ordinary train service via Antwerp and a fast leave and staff service via Boulogne on which we used converted Ambulance Trains as sleepers. This daily passenger train was facetiously called the "B. C." Express although we ultimately ran through from Boulogne to Cologne in 16 hours which was not bad going. The evacuation of locos, wagons, motor transport vehicles, horses and carts, etc., was being carried out by Cross Channel Services to Richboro, and fixtures such as huts, shops, etc, were sold off by auction as they stood on the ground. I need go no further.

I fear I have rather overwhelmed you with facts and figures which I have given you, not in any way in glorifications of "Transportation with the B. E. F." as might appear to be the case, since it were superfluous to extol that wonderful organiser and great leader and driver Sir Eric Geddes, and the splendid efforts of all ranks of D. G. T. speak for themselves, but for their practical value and in order to show what the transportation requirements of a big war actually amount to, if only as an object lesson and a study.

Transportation in France has, I claim, a great past, on the other hand transportation in India has, I maintain, an immense future. One has only to step outside this theatre to see how backward we are here in Simla with lifts, ropeways and such like local transportation facilities, and to look at the map of India with the country cut up into strips by the great rivers, and only as many ports as can be counted on the fingers of one hand, ill connected by railway at that, to realise the situation and the importance of studying transportation closely in all its branches, its balancing possibilities and improving it in all directions.

Sir George Buchanan has done good service to draw attention to our ports and Lord Montagu of Beaulieu, Mr. Dorman, and other writers to our roads. There is surely every reason to encourage more transportation by our inland waterways. However these are matters for the General Staff and for the talked-of Transportation Department, and not the theme of my lecture which I must now bring to a close.

WIRELESS Versus CABLE.

BY

CAPTAIN R. J. WILKINSON.

12th Pioneer.

NOW that the question of Wireless Telegraphy in general and the Imperial Wireless Chain in particular are occupying so much public attention, a short comparison of the relative advantages and disadvantages of Wireless and Submarine Telegraphy may be of some small value to military students.

In comparing the relative advantages and disadvantages of Submarine and Wireless Telegraphy there are four factors to be considered ; *i. e.* Cost, Efficiency, Vulnerability, and Secrecy.

The problem may also be approached from the Commercial, Scientific, or Military points of view.

The Commercial point of view weighs cost against efficiency, and considers the other two factors as of minor importance.

The scientist considers efficiency first, and the other three of minor importance, particularly cost.

The military man appreciates the above factors in the order, Vulnerability, Secrecy, Efficiency, Cost.

The question of cost divides itself into three headings, *viz.* Initial Cost, Maintenance, and cost to the user.

A submarine telegraph station is comparatively cheap to instal and maintain, but the connecting cable is expensive both in initial cost and maintenance. A moderate sized steamer, with a large crew of highly paid specialists is necessary for the exclusive purpose of laying and repairing the cables; and although it might be thought that, once laid at the bottom of the ocean, a cable would require no further attention, yet it is extraordinary what a number of faults will develop in the course of a year, which involve

dragging the cable up to the surface. Whether faults develop or not, the cable ship must always be standing by, ready to leave port at a few hours notice.

The initial cost of a Wireless installation, on the other hand is very high, but against this we may balance the fact there are no expensive connecting cables to be maintained.

The cost to the user depends to a large extent on the demand, e.g. if the cost of maintenance, plus interest on capital, plus over-head charges etc., amount to say £100 per diem and the number of word sent per day is one hundred, then obviously the cost per word will be £1, which means that as no one would pay that rate, wireless could not compete with cable, except at a loss. If, on the other hand, the number of words sent per day were ten thousand then the cost per word would be about two pence and so on.

If we compare, therefore, the two systems of communication, the initial cost, plus the cost of installation, plus maintenance charges, we shall find that the balance is lighter on the Wireless side, but the question of the comparative cost to the user being so largely one of demand, is fluid; at present it is cheaper to use cable because the latter carries more traffic, but given equal traffic it would probably be found that Wireless could compare very favourably with cable.

The next factor to be considered is that of efficiency.

A wireless station transmits its messages through the aether without the aid of connecting cables and is therefore subject to interference from atmospheric disturbance or from other stations. The latter difficulty can be overcome, in the case of friendly stations, by coordination of wave lengths and time tables. This difficulty is not met with to any appreciable extent in cable telegraphy.

Electric waves sent out by a Wireless transmitter spread in all directions, therefore only a very minute proportion of the energy expended reaches the receiving station.

This characteristic is however an advantage for "omnibus" working i.e., when one transmitting station sends to a number of

receiving stations; no more energy being required whether sending to one or 'n' receivers. It is also an advantage when transmitter or receiver is mobile.

At present there is no practicable method of attracting the attention of the receiving operator, unless he has the receivers on his ears and is listening on the wave length of the transmitting station. There is also this disadvantage, that being, as stated above, subject to interference, a message may have to be repeated several times before being received correctly.

In cable telegraphy, the terminals being in tangible communication with each other, communication is more certain and the system can, generally speaking, handle more traffic.

On the other hand in the case of a multiple address cablegram, separate copies must be given to each circuit which, in a busy office, each require a separate operator, but it must be remembered that whereas in a wireless station, only one message can be sent at once, in a cable station, as many messages can be sent simultaneously as there are circuits, and indeed, very often, by what is known as "quadruplex" working two messages can be sent simultaneously from both ends of the same cable.

Other things being equal, wireless is much quicker than cable, for, whereas signals over a long cable take an appreciable time to pass, a wireless wave moves at the rate of a hundred and eighty six thousand miles per second. We may say, therefore, that for all practical purposes, distance makes no difference to the time taken by a wireless message, once communication has been established.

For technical reasons there are limits to the length which a cable may run without being brought to land and either relayed or the message re-transmitted. The following details are instructive in the case of a cablegram from England to Australia. The cablegram passes through the following points, London, Porthurno, Gibraltar, Malta, Alexandria, Suez, Aden, Bombay, Madras, Singapore, Banjuwang (East of Java) to Port Darwin, or, by the All Red Route,—London, Valentia, Newfoundland, Nova Scotia, Esquimalt, Fanning Island, Fiji Isles, Norfolk Island to Brisbane.

A clear line message would take about one minute. An ordinary message in pre-war days took from half an hour to one hour. In the present time, owing to pressure of traffic and other reasons, a message takes two or three days to pass.

On the other hand as has been shown above, with direct communication established, a radiogram can be transmitted instantaneously. A message was recently sent by Wireless from Baghdad to London and a reply received in twenty minutes.

If therefore we divide the heading efficiency into the two sub-heads of speed and reliability, we shall then see that, whereas with a properly organised system of wireless Communication, the latter has the advantage over cable, yet on the question of all-round reliability, the palm must for the present be given to the submarine cable. After all the man who pays is only interested in getting his cablegrams to their destination.

We now come to the question of vulnerability. A wireless station can only be put out of action by a direct mishap, but a cable station can be rendered inoperative by interruption of the cable, as well as by destruction of the terminal. The balance in this case is therefore in favour of wireless.

Secrecy, with wireless can at present only be ensured by the use of ciphers and codes, which involve extra labour and delay for the reason that anyone with a suitable receiver can intercept a wireless message, whereas in cable telegraphy interception is only possible either by direct or inductive tapping. In the matter of secrecy, therefore, the cable has the advantage over wireless.

Summarising our conclusions we find the following results, Wireless is cheaper in the long run than submarine telegraphy but more expensive at present to the user. Wireless is quicker than cable but less reliable.

Cable is more vulnerable than Wireless.

Cable is more secret than Wireless.

At the present stage of wireless development, therefore, from the commercial point of view the advantage lies with submarine telegraphy.

From the scientific and military standpoints, wireless probably has the advantage, although military considerations vary with the circumstances.

Let us now consider the question from the particular point of view of British Imperial strategy which depends largely on Sea Power.

The guarding of our far flung lines of communication necessitates the establishment of suitable overseas bases. For the proper coordination of action throughout the Empire it is necessary that these bases be in intercommunication with each other and in more or less direct communication with the home base. These communications have hitherto been by means of submarine and other cables, by means of which orders and information can be sent to any particular naval base, and distributed from thence by local means. The weak point of this network of cables is its vulnerability in war time. A well coordinated scheme of Wireless communication will do all that cable can do more quickly, more safely, and more efficiently. For instance, orders sent out by the Admiralty can be received simultaneously by the overseas base or bases and by the Fleets at Sea.

"THE TRAINING OF THE INDIAN PLATOON COMMANDER."

BY

CAPTAIN B. H. BONHAN-CARTER, 40TH PATHANS,

(Late Commandant The U. P. District Platoon Commanders School.)

Introduction.—"The final essential is skilful, resolute, and understanding leadership in every grade of command. Unless the plan of action is sound and has been carefully prepared, the highest moral and physical qualities on the part of the troops will be unavailing, while, once the battle is joined, success or failure will depend largely on the tactical skill and initiative of the junior leaders. The wide decentralization necessitated by modern weapons tends ever to increase the responsibility of subordinates; the efficiency of its platoon commanders will often be the measure of an army's success."

(F. S. R. Volume II, Chapter I, paragraph I.)

Pre-war.—The British Army was fortunate, in that, before the Great War broke out, the platoon system had been introduced, and, in most cases, was in thorough working order. In the Indian Army this was not so. In 1914 most regiments were still organised on the double-company basis; and the platoon system was introduced only at a later date, the change taking place while the army was engaged in one of the largest wars in history. It is little to be wondered at then, that, in many cases, the change has been in name only, and in reality the old pre-war system still survives.

Then the state of any regiment in the Indian Army depended mainly on the efficiency of its British Officers. The double-company commander certainly had four Indian Officers to assist him a subedar to command each of his companies, with a jemadar

to command a half-company under him. The senior subedar, in the absence of the British company officer, also acted as 2nd in Command of the company. The Indian Officers, however, had practically no responsibility. They were given little opportunity of using their own initiative, and possessed no sense of command ; this was due, in the main, to the fact that they were seldom allowed to give orders on their own responsibility, but were ever carrying out those given by the British Officers on whose shoulders the whole responsibility rested. The Indian Officers, in fact, were so only in name ; in reality they were but glorified Non-Commissioned Officers.

In many regiments this old system is still in vogue. The company commander still "runs" all four platoons himself, and takes the whole responsibility on his own shoulders, relegating his platoon commanders to the same position as they held as Indian Officers before the war. The change in organization is one of nomenclature only.

The change that should have taken place in the role of the Indian Officer on the introduction of the platoon system is pointed out most forcefully in the extract from F. S. R. that has been chosen as an introduction to this essay.

The writer will endeavour to point out that the training which he receives at present scarcely tends to make the Indian Officer an efficient platoon commander and offers suggestions for its improvement as under :—

- (1) The establishment of a school for training Indian platoon commanders.
- (2) A more intensive system of regimental training.
- (3) A change in the method of promotion.

A comparison with the British Armies—Can we honestly say that the amount of responsibility that the average Indian platoon commander is called upon to shoulder, or that the training which he receives at present in times of peace, in his daily life in a regiment in cantonments, is sufficient to fit him for the great

responsibility that is to be laid on his shoulders in time of war? On him alone, so F. S. R. affirms, may depend the measure of an army's success.

Let us for one moment compare the training received by the British Platoon Commander, before he is allowed to exercise his command in the army, with that of the Indian. Normally, he is first required to be sufficiently well educated to pass the entrance examination into Sandhurst. There he is given a sound military training for a period which varies from one to two years. He is then required to pass a second examination out of the Military College. If successful, he receives his commission, and joins a regiment as a platoon commander. But even now his education and training are not considered complete. He continues to be trained regimentally, and is sent on courses of instruction, etc., with a view to further fitting him for his responsible position. Finally, after some years' service and experience in handling men, he may be considered to be an efficient platoon commander.

Even during the stress of the Great War, except at the very beginning during 1914-15, no platoon commander was allowed to exercise his command in the British Army until he had passed a course at a "Young Officers' School," or some institution of the kind, where he was taught something of the duties and responsibilities of his new position. In many cases too these "Embryo Platoon Commanders" were N. C. O's who had had experience in the field already, and often had years of service behind them, as is usually the case in the Indian Army. But they even were not considered to be capable of teaching themselves to be efficient platoon commanders. They too had to pass through the School where they were taught how to make themselves efficient.

In the Indian Army, the training that a candidate receive as a N. C. O., and the examinations that he now has to pass for promotion, (A.R.I., Vol. II, App. XXVII) are considered sufficient; and the platoon commander is so created by a stroke of

the pen. He has no special training, no school to go through to help him to understand the duties and responsibilities of his new position. He is merely created a platoon commander, and left to work out his own salvation

Would it not appear that if it is considered necessary to expend as much money, time, and labour as is spent on the instruction of the British Officer to fit him for his position as a platoon commander in the British Army, it is equally, if not more, essential that the platoon commander in the Indian Army be similarly trained. It is hardly fair to expect the latter, handicapped as he is to start with by his sketchy education, and by having to assimilate knowledge and ideas that are largely foreign to his nature and up-bringing, to be able to make himself into an efficient platoon commander without ever being taught how to set about his task.

A start in the right direction has been made by the opening of The Prince of Wales' Royal Indian Military College at Dehra Dun. There youths are being trained with the idea of passing into Sandhurst eventually. The platoon commanders of the future are receiving their instruction, but what of those in the Army at present ?

The School for Platoon Commanders.—It is suggested that for the training of the present and future platoon commanders of the Indian Army some sort of School is essential. Such a school could be conducted on similar lines to the R. M. C. at Sandhurst, or like the Senior Officers' School at Belgaum.

Candidates could be placed in two classes :—

- (a) Indian Officers who would be sent to the school to learn what the duties and responsibilities of their rank consist of. These would be reported on at the end of the course, with a view to letting their Commanding Officers know how they had done at the school, and the views of the staff as to whether they were considered suitable for their rank, or for future promotion. Commanding Officers would then be enabled to

engines, and helped as far as possible in their power. But the heaviest strain fell on the French Railway organisation, who had made the mistake, which we did ourselves in the earlier days, to send too many of their younger technical men into the firing line, consequently their railway men soon became worked out and it was only due to the pushfulness and resource of their transportation Chiefs, Colonels Payot and Boquet, and men like Colonel Dumont and Monsieur Javary of the Nord Railway, that they were able to carry on. Their wagon control was unfortunately very weak and our efforts to induce them to organise it on sound lines in co-ordination with our R.O.D. wagon control were unavailing. Consequently there was considerable wagon wastage and great difficulty in adjusting the traffic requirements at the different centres. However all is well that ends well.

21. The D. G. T. Organisation was subjected to non-professional criticism in connection with its arrangements for following up the general advance in the latter part of 1918, but the layman cannot possibly conceive the enormous difficulties which confronted transportation at this stage and throughout the winter of 1918-19. The men, mostly of advanced years, the glamour gone and peace in sight were absolutely worn out, and they wanted to return to their families and civil occupation. The demands were exceptionally heavy, and it was only with the greatest difficulty by ruthlessly shutting down Light Railways and other services, and sacrificing everything to the construction of roads and main lines and handling the traffic, that we were able to carry on at all.

22. My request to the General Headquarters that only contact and Police troops should be pushed forward over the devastated zone was deemed impracticable and the best part of five British armies and the cavalry took up the advance into Belgium. As may be imagined, the transportation position became acute, but we have this to our credit that I believe only on few occasions did the advance troops find it necessary to requisition on the country side for supplies. The French on our right and following in our wake under more favourable conditions, progressed but

Again, objections might be raised to the entrance or passing out examinations, on the ground that it would not be fair to expect men of one particular class to compete with those of another, as the former, though equally good fighters, are not blessed with the agile brains of the latter. There is no reason however, why such competitive examination should not be limited to candidates of the same class, e.g., Gurkha compete with Gurkha only, Sikh with Sikh, and so on.

It might so happen that none of the candidates sent from some particular regiment were passed out as suitable for promotion; and further that that particular regiment had a vacancy for promotion. Then a candidate, who had been passed as fit for promotion, would have to be selected from another regiment in the group and promoted to fill the vacancy in question. The N. C. O's of the afflicted unit would learn by bitter experience that the old order changeth, and that it was now necessary to be properly qualified and efficient before one can hope to attain to commissioned rank.

Regimental Training.—The change that is required in the regimental training can be summed up in the realization that the training of the platoon commander is the most important of all training. The British Officers have got to realize that they no longer command the fighting unit, as they did before the war. Then the fighting unit was the double-company, now it is the platoon. So the platoon commander has now taken the double company commander's place. The most that the latter can hope to do, once the battle has been joined, is to control his platoon commanders by the previous training that he has given them, by his orders, and the use of his reserves. The actual command of the men has passed from his hands to those of his subordinates. When this basic fact is realized the importance of the training of the platoon commander will be seen in its true perspective. The company commander will then train his platoon commanders to act on their own initiative, to use their own brains, and to act intelligently independent of himself.

maintained by Rhine barges via Rotterdam, ordinary train service via Antwerp and a fast leave and staff service via Boulogne on which we used converted Ambulance Trains as sleepers. This daily passenger train was facetiously called the "B. C." Express although we ultimately ran through from Boulogne to Cologne in 16 hours which was not bad going. The evacuation of locos, wagons, motor transport vehicles, horses and carts, etc., was being carried out by Cross Channel Services to Richboro, and fixtures such as huts, shops, etc., were sold off by auction as they stood on the ground. I need go no further.

I fear I have rather overwhelmed you with facts and figures which I have given you, not in any way in glorifications of "Transportation with the B. E. F." as might appear to be the case, since it were superfluous to extol that wonderful organiser and great leader and driver Sir Eric Geddes, and the splendid efforts of all ranks of D. G. T. speak for themselves, but for their practical value and in order to show what the transportation requirements of a big war actually amount to, if only as an object lesson and a study.

Transportation in France has, I claim, a great past, on the other hand transportation in India has, I maintain, an immense future. One has only to step outside this theatre to see how backward we are here in Simla with lifts, ropeways and such like local transportation facilities, and to look at the map of India with the country cut up into strips by the great rivers, and only as many ports as can be counted on the fingers of one hand, ill connected by railway at that, to realise the situation and the importance of studying transportation closely in all its branches, its balancing possibilities and improving it in all directions.

Sir George Buchanan has done good service to draw attention to our ports and Lord Montagu of Beaulieu, Mr. Dorman, and other writers to our roads. There is surely every reason to encourage more transportation by our inland waterways. However these are matters for the General Staff and for the talked-of Transportation Department, and not the theme of my lecture which I must now bring to a close.

WIRELESS Versus CABLE.

BY

CAPTAIN R. J. WILKINSON.
11th Pioneer.

NOW that the question of Wireless Telegraphy in general and the Imperial Wireless Chain in particular are occupying so much public attention, a short comparison of the relative advantages and disadvantages of Wireless and Submarine Telegraphy may be of some small value to military students.

In comparing the relative advantages and disadvantages of Submarine and Wireless Telegraphy there are four factors to be considered ; *i. e.* Cost, Efficiency, Vulnerability, and Secrecy.

The problem may also be approached from the Commercial, Scientific, or Military points of view.

The Commercial point of view weighs cost against efficiency, and considers the other two factors as of minor importance.

The scientist considers efficiency first, and the other three of minor importance, particularly cost.

The military man appreciates the above factors in the order, Vulnerability, Secrecy, Efficiency, Cost.

The question of cost divides itself into three headings, *viz.* Initial Cost, Maintenance, and cost to the user.

A submarine telegraph station is comparatively cheap to instal and maintain, but the connecting cable is expensive both in initial cost and maintenance. A moderate sized steamer, with a large crew of highly paid specialists is necessary for the exclusive purpose of laying and repairing the cables; and although it might be thought that, once laid at the bottom of the ocean, a cable would require no further attention, yet it is extraordinary what a number of faults will develop in the course of a year, which involve

dragging the cable up to the surface. Whether faults develop or not, the cable ship must always be standing by, ready to leave port at a few hours notice.

The initial cost of a Wireless installation, on the other hand is very high, but against this we may balance the fact there are no expensive connecting cables to be maintained.

The cost to the user depends to a large extent on the demand, *e.g.* if the cost of maintenance, plus interest on capital, plus over-head charges etc., amount to say £100 per diem and the number of word sent per day is one hundred, then obviously the cost per word will be £1, which means that as no one would pay that rate, wireless could not compete with cable, except at a loss. If, on the other hand, the number of words sent per day were ten thousand then the cost per word would be about two pence and so on.

If we compare, therefore, the two systems of communication, the initial cost, plus the cost of installation, plus maintenance charges, we shall find that the balance is lighter on the Wireless side, but the question of the comparative cost to the user being so largely one of demand, is fluid; at present it is cheaper to use cable because the latter carries more traffic, but given equal traffic it would probably be found that Wireless could compare very favourably with cable.

The next factor to be considered is that of efficiency.

A wireless station transmits its messages through the aether without the aid of connecting cables and is therefore subject to interference from atmospheric disturbance or from other stations. The latter difficulty can be overcome, in the case of friendly stations, by coordination of wave lengths and time tables. This difficulty is not met with to any appreciable extent in cable telegraphy.

Electric waves sent out by a Wireless transmitter spread in all directions, therefore only a very minute proportion of the energy expended reaches the receiving station.

This characteristic is however an advantage for "omnibus" working *i.e.*, when one transmitting station sends to a number of

receiving stations; no more energy being required whether sending to one or 'n' receivers. It is also an advantage when transmitter or receiver is mobile.

At present there is no practicable method of attracting the attention of the receiving operator, unless he has the receivers on his ears and is listening on the wave length of the transmitting station. There is also this disadvantage, that being, as stated above, subject to interference, a message may have to be repeated several times before being received correctly.

In cable telegraphy, the terminals being in tangible communication with each other, communication is more certain and the system can, generally speaking, handle more traffic.

On the other hand in the case of a multiple address cablegram, separate copies must be given to each circuit which, in a busy office, each require a separate operator, but it must be remembered that whereas in a wireless station, only one message can be sent at once, in a cable station, as many messages can be sent simultaneously as there are circuits, and indeed, very often, by what is known as "quadriplex" working two messages can be sent simultaneously from both ends of the same cable.

Other things being equal, wireless is much quicker than cable, for, whereas signals over a long cable take an appreciable time to pass, a wireless wave moves at the rate of a hundred and eighty six thousand miles per second. We may say, therefore, that for all practical purposes, distance makes no difference to the time taken by a wireless message, once communication has been established.

For technical reasons there are limits to the length which a cable may run without being brought to land and either relayed or the message re-transmitted. The following details are instructive in the case of a cablegram from England to Australia. The cablegram passes through the following points, London, Porthkurno, Gibraltar, Malta, Alexandria, Suez, Aden, Bombay, Madras, Singapore, Banjuwang (East of Java) to Port Darwin, or, by the All Red Route,—London, Valentia, Newfoundland, Nova Scotia, Esquimalt, Fanning Island, Fiji Isles, Norfolk Island to Brisbane.

A clear line message would take about one minute. An ordinary message in pre-war days took from half an hour to one hour. In the present time, owing to pressure of traffic and other reasons, a message takes two or three days to pass.

On the other hand as has been shown above, with direct communication established, a radiogram can be transmitted instantaneously. A message was recently sent by Wireless from Baghdad to London and a reply received in twenty minutes.

If therefore we divide the heading efficiency into the two sub-heads of speed and reliability, we shall then see that, whereas with a properly organised system of wireless Communication, the latter has the advantage over cable, yet on the question of all-round reliability, the palm must for the present be given to the submarine cable. After all the man who pays is only interested in getting his cablegrams to their destination.

We now come to the question of vulnerability. A wireless station can only be put out of action by a direct mishap, but a cable station can be rendered inoperative by interruption of the cable, as well as by destruction of the terminal. The balance in this case is therefore in favour of wireless.

Secrecy, with wireless can at present only be ensured by the use of ciphers and codes, which involve extra labour and delay for the reason that anyone with a suitable receiver can intercept a wireless message, whereas in cable telegraphy interception is only possible either by direct or inductive tapping. In the matter of secrecy, therefore, the cable has the advantage over wireless.

Summarising our conclusions we find the following results, Wireless is cheaper in the long run than submarine telegraphy but more expensive at present to the user. Wireless is quicker than cable but less reliable.

Cable is more vulnerable than Wireless.

Cable is more secret than Wireless.

At the present stage of wireless development, therefore, from the commercial point of view the advantage lies with submarine telegraphy.

From the scientific and military standpoints, wireless probably has the advantage, although military considerations vary with the circumstances.

Let us now consider the question from the particular point of view of British Imperial strategy which depends largely on Sea Power.

The guarding of our far flung lines of communication necessitates the establishment of suitable overseas bases. For the proper coordination of action throughout the Empire it is necessary that these bases be in intercommunication with each other and in more or less direct communication with the home base. These communications have hitherto been by means of submarine and other cables, by means of which orders and information can be sent to any particular naval base, and distributed from thence by local means. The weak point of this network of cables is its vulnerability in war time. A well coordinated scheme of Wireless communication will do all that cable can do more quickly, more safely, and more efficiently. For instance, orders sent out by the Admiralty can be received simultaneously by the overseas base or bases and by the Fleets at Sea.

" THE TRAINING OF THE INDIAN PLATOON COMMANDER."

BY

CAPTAIN B. H. BONHAN-CARTER, 40TH PATHANS,

(Late Commandant The U. P. District Platoon Commanders School.)

Introduction.—"The final essential is skilful, resolute, and understanding leadership in every grade of command. Unless the plan of action is sound and has been carefully prepared, the highest moral and physical qualities on the part of the troops will be unavailing, while, once the battle is joined, success or failure will depend largely on the tactical skill and initiative of the junior leaders. The wide decentralization necessitated by modern weapons tends ever to increase the responsibility of subordinates; the efficiency of its platoon commanders will often be the measure of an army's success."

(F. S. R. Volume II, Chapter I, paragraph I.)

Pre-war.—The British Army was fortunate, in that, before the Great War broke out, the platoon system had been introduced, and, in most cases, was in thorough working order. In the Indian Army this was not so. In 1914 most regiments were still organised on the double-company basis; and the platoon system was introduced only at a later date, the change taking place while the army was engaged in one of the largest wars in history. It is little to be wondered at then, that, in many cases, the change has been in name only, and in reality the old pre-war system still survives.

Then the state of any regiment in the Indian Army depended mainly on the efficiency of its British Officers. The double-company commander certainly had four Indian Officers to assist him a subedar to command each of his companies, with a jemadar

to command a half-company under him. The senior subedar, in the absence of the British company officer, also acted as 2nd in Command of the company. The Indian Officers, however, had practically no responsibility. They were given little opportunity of using their own initiative, and possessed no sense of command; this was due, in the main, to the fact that they were seldom allowed to give orders on their own responsibility, but were ever carrying out those given by the British Officers on whose shoulders the whole responsibility rested. The Indian Officers, in fact, were so only in name; in reality they were but glorified Non-Commissioned Officers.

In many regiments this old system is still in vogue. The company commander still "runs" all four platoons himself, and takes the whole responsibility on his own shoulders, relegating his platoon commanders to the same position as they held as Indian Officers before the war. The change in organization is one of nomenclature only.

The change that should have taken place in the role of the Indian Officer on the introduction of the platoon system is pointed out most forcefully in the extract from F. S. R. that has been chosen as an introduction to this essay.

The writer will endeavour to point out that the training which he receives at present scarcely tends to make the Indian Officer an efficient platoon commander and offers suggestions for its improvement as under:—

- (1) The establishment of a school for training Indian platoon commanders.
- (2) A more intensive system of regimental training.
- (3) A change in the method of promotion.

A comparison with the British Armies—Can we honestly say that the amount of responsibility that the average Indian platoon commander is called upon to shoulder, or that the training which he receives at present in times of peace, in his daily life in a regiment in cantonments, is sufficient to fit him for the great

responsibility that is to be laid on his shoulders in time of war? On him alone, so F. S. R. affirms, may depend the measure of an army's success.

Let us for one moment compare the training received by the British Platoon Commander, before he is allowed to exercise his command in the army, with that of the Indian. Normally, he is first required to be sufficiently well educated to pass the entrance examination into Sandhurst. There he is given a sound military training for a period which varies from one to two years. He is then required to pass a second examination out of the Military College. If successful, he receives his commission, and joins a regiment as a platoon commander. But even now his education and training are not considered complete. He continues to be trained regimentally, and is sent on courses of instruction, etc., with a view to further fitting him for his responsible position. Finally, after some years' service and experience in handling men, he may be considered to be an efficient platoon commander.

Even during the stress of the Great War, except at the very beginning during 1914-15, no platoon commander was allowed to exercise his command in the British Army until he had passed a course at a "Young Officers' School," or some institution of the kind, where he was taught something of the duties and responsibilities of his new position. In many cases too these "Embryo Platoon Commanders" were N. C. O's who had had experience in the field already, and often had years of service behind them, as is usually the case in the Indian Army. But they even were not considered to be capable of teaching themselves to be efficient platoon commanders. They too had to pass through the School where they were taught how to make themselves efficient.

In the Indian Army, the training that a candidate receive as a N. C. O., and the examinations that he now has to pass for promotion, (A.R.I., Vol. II, App. XXVII) are considered sufficient; and the platoon commander is so created by a stroke of

the pen. He has no special training, no school to go through to help him to understand the duties and responsibilities of his new position. He is merely created a platoon commander, and left to work out his own salvation

Would it not appear that if it is considered necessary to expend as much money, time, and labour as is spent on the instruction of the British Officer to fit him for his position as a platoon commander in the British Army, it is equally, if not more, essential that the platoon commander in the Indian Army be similarly trained. It is hardly fair to expect the latter, handicapped as he is to start with by his sketchy education, and by having to assimilate knowledge and ideas that are largely foreign to his nature and up-bringing, to be able to make himself into an efficient platoon commander without ever being taught how to set about his task.

A start in the right direction has been made by the opening of The Prince of Wales' Royal Indian Military College at Dehra Dun. There youths are being trained with the idea of passing into Sandhurst eventually. The platoon commanders of the future are receiving their instruction, but what of those in the Army at present ?

The School for Platoon Commanders.—It is suggested that for the training of the present and future platoon commanders of the Indian Army some sort of School is essential. Such a school could be conducted on similar lines to the R. M. C. at Sandhurst, or like the Senior Officers' School at Belgaum.

Candidates could be placed in two classes :—

- (a) Indian Officers who would be sent to the school to learn what the duties and responsibilities of their rank consist of. These would be reported on at the end of the course, with a view to letting their Commanding Officers know how they had done at the school, and the views of the staff as to whether they were considered suitable for their rank, or for future promotion. Commanding Officers would then be enabled to

Furthermore the Civil can produce men who can recognise the outlaws whereas the military cannot. They have also lists of men 'wanted' and know, fairly accurately, whom they may expect to find in a given village, and very often in whose house they may be found or for whom they may be working.

Of course the operation is purely a military one, and, in spite of the great assistance which the Civil are in a position to render, there can be no question as to who is in command. The military commander is the responsible person and he commands.

A (3). *Importance of secrecy.*—This is a point on which sufficient emphasis cannot be laid. Possibly more failures have occurred from neglecting to keep plans absolutely secret than from any other reason. Real secrecy is absolutely essential.

It will usually be sufficient if the following alone know exactly what is to happen and the date.

The senior Civil Officer of the area.

The local G. O. C.

The O. C. Column.

Subordinate officers, such as the O's C. Infantry, Pack Battery and M. T. Company, should not know even that a raid is contemplated until, at the most, 24 hours before. It should be sufficient then to warn them that they must prepare for a 24 or 36 hours' operation and give to them such orders as will ensure their being able to move on the required scale of transport.

Neither the telephone nor the telegram should be used before an operation. Registered letters and personal interviews are the only safe method of settling plans.

Provided that orders have been written out and maps provided beforehand, the hour of parade or concentration should be timed so as to admit of these orders being distributed and explained just before starting.

For instance, if being conveyed in lorries or by train forms part of the programme, orders can be read during the journey.

In this way and in no other can secrecy be maintained.

Again, objections might be raised to the entrance or passing out examinations, on the ground that it would not be fair to expect men of one particular class to compete with those of another, as the former, though equally good fighters, are not blessed with the agile brains of the latter. There is no reason however, why such competitive examination should not be limited to candidates of the same class, e.g., Gurkha compete with Gurkha only, Sikh with Sikh, and so on.

It might so happen that none of the candidates sent from some particular regiment were passed out as suitable for promotion; and further that that particular regiment had a vacancy for promotion. Then a candidate, who had been passed as fit for promotion, would have to be selected from another regiment in the group and promoted to fill the vacancy in question. The N. C. O's of the afflicted unit would learn by bitter experience that the old order changeth, and that it was now necessary to be properly qualified and efficient before one can hope to attain to commissioned rank.

Regimental Training.—The change that is required in the regimental training can be summed up in the realization that the training of the platoon commander is the most important of all training. The British Officers have got to realize that they no longer command the fighting unit, as they did before the war. Then the fighting unit was the double-company, now it is the platoon. So the platoon commander has now taken the double company commander's place. The most that the latter can hope to do, once the battle has been joined, is to control his platoon commanders by the previous training that he has given them, by his orders, and the use of his reserves. The actual command of the men has passed from his hands to those of his subordinates. When this basic fact is realized the importance of the training of the platoon commander will be seen in its true perspective. The company commander will then train his platoon commanders to act on their own initiative, to use their own brains, and to act intelligently independent of himself.

The majority of British officers are satisfied with far too low a standard of Indian Officer. They do not show that they require any improvement, so they get none. Regarding the matter from a mere mercenary point of view, are there many professions in India in which an Indian receives Rs. 75 a month with free quarters, rations, and clothing allowance in addition, who cannot read and write his own language with ease and English as well, and who has not passed some University Examination? Yet such are the emoluments of the most junior of our Indian Officers; the seniors receive more. Surely under the circumstances a higher standard might be required of them.

It has always been the custom in India for the "Soldier Class" to be uneducated, and the art of reading and writing, and education generally has always been confined to the "Writer Class." Because the latter are not war-like, education has been despised by the fighters. This prejudice can be allowed to exist no longer. It was all very well when men fought shoulder to shoulder with bows and arrows or flintlocks, but the magazine rifle and machine gun have altered matters. The human voice can no longer make itself heard by all, and orders have to be written down and conveyed to subordinates. It is therefore essential that the subordinates, as well as the commanders, should be able to read and write with ease.

The British Officer, too, the only officer in the Indian Army at present who has been properly educated, is no longer in a position to command the men in battle, the executive command having passed from his hands to those of another. The first essential then is to educate that other so that he may be capable of commanding—which may be defined as being able to think and reason, and issue necessary orders on his own initiative without being helped by some one else.

Before the War, it was possible for an Indian Officer to carry on with a minimum of education, for he was in reality but a glorified N. C. O. His British Officer was always there to do any necessary thinking for him, and all he had to do was to obey

orders mechanically. With the platoon commander in a modern battle things are very different. He now commands the fighting unit, and has to direct its action in battle. His command is an independent one, and he must be capable of using his own initiative. He must be made to realize this fact.

Another difficulty in the training of the Indian Officer in the regiment is that of dealing with the slacker. Why is it that a really good N. C. O. sometimes turns out to be a bad Indian Officer? One reason would appear to be that he has reached the limit of his ambition, that he has "Pahunch giya." As long as he was still a N. C. O., he worked hard, as he knew that his position was insecure, and he could be reduced for inefficiency if he did not. Now that he is an Indian Officer, he knows that unless he does something that is actually criminal, that is to say triable by Court Martial, his position is secure and he cannot be reduced. The yearly increments of pay at the discretion of the commanding officers certainly assist here, but more is required.

Many British Officers labour under the delusion that they cannot tell off their Indian Officers, as they would often like to do, for fear of harming their "Izzat," though the British Officers themselves are often far more severely reprovved and criticized by their superiors than ever their Indian Officers are. All possible pressure should be brought to bear on the Indian Officer who is not "pulling his weight," and he should be made to understand that he cannot take shelter under the "Izzat" that is given to his rank to avoid being reprovved for his slackness or mistakes. The modern platoon commander's position, in fact, should be no sinecure.

We have seen that the difference in the standard of education of the Indian platoon commander compared with the British is one of the main factors that militates against the efficiency of the former when compared with the latter. The first essential in training of the Indian platoon commander then must be to improve his education. He must be made to go regularly to school. The mistaken idea that if a man has obtained his first

Class Certificate of Education in the regiment he has nothing more to learn must be eradicated. The practice of an Indian Officer sometimes attending school as a supervisor, but never as a pupil should be altered; and he should be made to realize that his present standard of education is far below that required of a platoon commander.

Reading and writing his own language would be the first step; in this absolute fluency must be insisted on, laborious reading word by word is not good enough; similarly the writing must be quick and easily legible. Equal fluency in Roman Urdu must then be attained, and finally English should be taken. At the same time all the ordinary subjects of the school curriculum, Arithmetic, History, Geography, followed by simple Book-keeping, Map-reading and Field Sketching, should be taught. A study of these subjects will teach the platoon commander to use his brain, to think and reason. And eventually he will be enabled to appreciate a military situation, and issue orders on his own initiative—which is our object in view.

Education alone is not all that the Indian platoon commander requires. His military knowledge is often very weak. As he now has to exercise his command independently of his British officer, he must possess the requisite military knowledge, and be able to apply it. His greater fluency in reading will enable him to study his manuals more thoroughly, but that, in itself, is not enough. He must receive practical instruction. There should be daily parades for platoon commanders. The instruction of the men is carried out daily. In many regiments there are frequent parades for N. C. O's. But how often are special parades for platoon commanders held? Yet is not their training—the training of the men who are to command and lead—more important than the training of those who are to follow?

On these parades the first thing to ensure is that the platoon commander is master of his platoon weapons—the Rifle, Bayonet and Lewis Gun; more especially the last, about which few have

more than a very rudimentary knowledge. It must be remembered that the platoon commander, if he is to be the leader in war, must be the trainer in peace. To instruct efficiently one must be able to demonstrate. Do all Indian platoon commanders know enough about Musketry, Bayonet Fighting and the Lewis Gun to demonstrate with their own hands what they are endeavouring to teach? They used to have the knowledge, perhaps, when they were N. C. O's, but it has gone. Many Indian Officers have got an idea into their heads that it is "infra-dig" for them to demonstrate themselves, or they delude themselves into thinking so. The real truth is that it is far easier to be a supervisor and just look on and let some one else do the hard work than to do it oneself. But for the platoon commander to be able to train his platoon efficiently, and for the men to respect and follow him, he should be the best man at-arms in his platoon; and that is the ideal that he must have constantly before him on the platoon commanders' parades.

Once he has mastered his weapons, and knows their powers and limitations, his further training can be proceeded with. Now he can begin to learn something of the art of command. He should have made good progress with his reading by this time and have a foundation to work on. Practical map-reading would appear to be the next subject to receive attention. The average Indian platoon commander is painfully ignorant of the subject. He must be patiently and thoroughly taught until a map really does convey information to him rapidly. He will then be ready to embark on the most important part of his whole training—that of learning how to command a platoon in the field.

Here he must first be instructed how to appreciate a situation—a process that every commander has to go through before being able to issue orders. He must be taught how to arrange his thoughts, how to reason and draw conclusions from facts and information given to him; and having done so, to produce some plan of his own, then act on it. That is what is meant by appreciating a situation and issuing orders, and that is what no Indian

Officer has had to do before, because his British officers have always done it for him.

Daily life in the Regiment.—So much then for the education and training of the platoon commander in the school, on the parade ground and in the field ; but a difference will have also to be made in the work that he does and his treatment in the regiment off parade. An Indian Officer, by virtue of his commission, has the power of dealing summarily with cases and awarding punishment up to 3 days C.L. How often is this power exercised ? In the majority of regiments it is seldom, if ever, used. What is the reason of this ? Merely that the British Officers do the platoon commander's work. Every case, however trivial, is taken up to the British officer to deal with, and the platoon commander takes no responsibility at all.

Similarly platoon programmes of work should be made out by platoon commanders. The British Officers, as instructors, would certainly help and advise at first, but at the same time the platoon commander must be made to use his own brain, and produce a result himself. It is part of his training.

Again, does the platoon commander take any part in the actual office work ? Usually not. Yet this is just as much a part of his duty as the commander of a platoon, as it is the duty of the British officer as the commander of a company. He should see all correspondence that affects his platoon, and be required to deal with the problems involved. For instance a man claims some allowance or other, the platoon commander should find out if he is entitled to it or not, and then bring the case up if necessary. It is fully realized that company office work will be made far more tedious if such a course is adopted ; but on the other hand the platoon commander is being made to use his brain, and receiving invaluable training all the time.

In short, every platoon commander must be made to realize that he is entirely responsible for his platoon in every way—their clothing, rations, pay, pensions, are all primarily in his sphere—and he must be taught to deal with all the problems involved,

In peace time he can have his British officer to instruct and help him, but he must do no more ; for under the stress of war he will have far more knotty problems to solve, which may involve the fate of men's lives, or even of the army as a whole, and then he will not be able to appeal to his British officer for a decision. So it follows that unless he has been trained to work unaided in peace, he will not be efficient in war.

Promotion.—The question of promotion in the Indian Army is always a difficult one, as there are so many side issues which have to be gone into. At the same time, mainly owing to the war, there is an idea prevalent in many regiments among the men that mere seniority brings with it a " Haq " or right to promotion, irrespective of any other qualifications or ability. The introduction of an extremely simple device to combat this idea is suggested, a device which has been used with great success in one regiment. The scheme suggested is that of the adoption of an " Efficiency Card " for every man in the unit, on which marks are allotted for efficiency in all subjects, the total of the marks obtained showing the general state of efficiency of the man in question. A copy of the card is given on the next page. The card for N. C. O's is similar to the Sepoy's, but the subjects marked differ, as shown. In both cases the actual subjects to be marked, and the points to be allotted to each would have to be decided by a committee of all the Commanding Officers in a Group, so that all should be the same.

It is suggested that the platoon commander should be made responsible for the Sepoy's Efficiency Cards, the British Officers supervising their efforts and giving them advice where considered necessary ; and that the N. C. O.'s Efficiency Cards should be kept up by the Company Commander himself.

In this way it is believed that a similar system of promotion could be maintained among all the regiments in a group, and further that the most efficient men would be promoted. The man who did not trouble to make himself efficient would have no ground for complaint ; and a happier, better and more efficient regiment would be produced as a result,

SEPOY'S EFFICIENCY CARD

(attached to N. C. O's card on promotion).

No. Name. Enlisted. Photo.
Caste. village. District.
Rail Station. P. & T. O.
War Service.

Year of Tests	...	...	Max	22	23	24	25	26	27	&c.
Musketry	...	...	25							
Bayonet Fighting	...	...	10							
Physical Training	...	...	10							
Games	...	...	10							
Drill and Smartness	...	...	10							
Guard Duties	...	...	5							
Rifle Exercise	...	...	10							
War Service	...	...	10							
Education	...	...	15							
Character & Conduct	...	...	10							
Field Work	...	...	25							
Total	...	...	140							
Specialist Subjects	...	...						
Signalling	...	...	10							
Lewis Gun	...	...	10							
Bombing	...	...	10							
Scouting	...	...	10							
Observer & Runner	...	...	10							
&c &c.	...	...						
Count half for promotion Total	...	...	50							

Yearly General Remarks (made at the end of the training season).

1922.

(at the back of the card.)

1923.

The card for N. C. O's is similar to the above, but the subjects marked are different. The undermentioned were the subjects marked on the copy that was given me by the regiment in question.

Heading as for the Sepoy's card, but in addition the dates of promotion from Lance Naik to Subedar Major were allotted a space; and the duration of various appointments held were also noted.

Platoon Work 50. Discipline and Line Work 20. Education 25. Field Work 40. Standing Orders 15. Field Service 20. Regiment Service 10. Games and Fitness 10. Courses 50.

SUMMARY.

In conclusion the points of this essay may be summarized thus :—

The known discrepancy between the efficiency of the Indian and British Platoon Commander has been traced to two primary causes.

- (a) The deficiency of the education of the former.
- (b) His lack of proper training.

To make the Indian platoon commander more efficient, it has been suggested that—

- (1) An Indian "Sandhurst" should be Formed for the instruction of Indian platoon commanders present and future.
- (2) The British Officers of the Indian Army require a fuller grasp of the meaning of the change in organization introduced by the platoon system, and a more vivid realization of the limitations imposed upon their own activities by the wide decentralization necessitated by modern weapons.
- (3) The regimental training and education of the Indian platoon commander requires reorganizing and bringing up to date.

For it must be realized that the measure of the success of the Indian Army of the future will be the efficiency of its platoon commanders.

RAIDS AND REPRISALS ON THE NORTH-WEST-FRONTIER.

By M.F.C.

THE following notes are written in the hope that they may give officers who may be called on to carry out raids and reprisals across the border a certain amount of thought.

The easiest way to approach the subject is to try and visualise the various points which will have to be thought out beforehand.

These will naturally come under two main headings.

(A) The Preliminary Measures.

(B). The Actual Operations.

Under "A" there will be several minor headings :—

- (1) The object to be attained.
- (2) Co-operation with the Civil Authorities.
- (3) Importance of secrecy.
- (4) Preliminary reconnaissance.
- (5) Composition of force.

Under "B" will come :—

- (1) Concentration.
- (2) Approach march.
- (3) Deployment.
- (4) The attainment of the object.
- (5) Withdrawal.

Taking the Preliminary Measures in the order given above, we will commence with ;

A (1). *Object to be attained.*—Nearly all raids and reprisals are carried out at the request of the Civil Authorities and a clear

understanding must be arrived at with them as to the exact object aimed at.

For instance a raid may be undertaken :—

- (a) Against a village as a whole, which has misbehaved itself, with the object of doing as much damage as possible.
- (b) Against a village to arrest outlaws who are known to be harboured by certain men in that village. In this case the capture of the outlaws and the burning of their houses, or those of the men known to be harbouring them, will probably be the object, no other harm being done to the village.
- (c) Against a prosperous village, to carry off as much moveable property as possible, such as sheep, goats, camels, donkeys, etc.; with the object of making good a fine levied against a sub-section of a tribe.

The main point to be brought out is that a definite object must be assigned and a clear understanding must exist with the local Civil Authorities responsible for initiating the raid.

A. (2) *Co-operation with the Civil Authorities.*—It is essential that the fullest co-operation should exist between the local Civil Authorities and the commander of the force undertaking the raid:

The Civil are in a far better position to supply reliable guides than any military officer. They are backed by their civil intelligence, informers can be procured by them, local border maliks will be almost anxious to come forward to serve them, the contents of the local jail are at their disposal and may produce a guide to whom they can hold out hopes of a pardon should he play up.

In addition to their obvious ability to provide better guides, it is infinitely more satisfactory to allow all the civil work, such as calling on the maliks of a surrounded village to surrender either themselves or their outlaws, giving them the alternative if they show signs of refusing, etc., to be carried out by the Civil Authorities,

Furthermore the Civil can produce men who can recognise the outlaws whereas the military cannot. They have also lists of men 'wanted' and know, fairly accurately, whom they may expect to find in a given village, and very often in whose house they may be found or for whom they may be working.

Of course the operation is purely a military one, and, in spite of the great assistance which the Civil are in a position to render, there can be no question as to who is in command. The military commander is the responsible person and he commands.

A (3). *Importance of secrecy.*—This is a point on which sufficient emphasis cannot be laid. Possibly more failures have occurred from neglecting to keep plans absolutely secret than from any other reason. Real secrecy is absolutely essential.

It will usually be sufficient if the following alone know exactly what is to happen and the date.

The senior Civil Officer of the area.

The local G. O. C.

The O. C. Column.

Subordinate officers, such as the O's C. Infantry, Pack Battery and M. T. Company, should not know even that a raid is contemplated until, at the most, 24 hours before. It should be sufficient then to warn them that they must prepare for a 24 or 36 hours' operation and give to them such orders as will ensure their being able to move on the required scale of transport.

Neither the telephone nor the telegram should be used before an operation. Registered letters and personal interviews are the only safe method of settling plans.

Provided that orders have been written out and maps provided beforehand, the hour of parade or concentration should be timed so as to admit of these orders being distributed and explained just before starting.

For instance, if being conveyed in lorries or by train forms part of the programme, orders can be read during the journey.

In this way and in no other can secrecy be maintained.

A (4). *Preliminary reconnaissance.*—A preliminary reconnaissance by the O.C. Column must invariably be made.

As with every thing else in connection with the raid, it must not attract attention. It should be carried out in plain clothes and some plausible reason given for one's presence.

Naturally it will not be possible to cross the border, but a careful survey of the country with field glasses in conjunction with a good map will be very helpful.

A (5) *Composition of the force.*—The size and composition of the force must necessarily vary with the strength of the village to be rounded up, the moral of the tribe operated against, the distance across the border, etc.

For example, a raid into Mahsud country would require more men than a raid against the Orakzais, who in turn are capable of offering a stronger resistance than the Bunerwals or Gaduns.

In this article, as minor raids only are being considered, the size of the force is never contemplated to exceed :—

400 Infantry.

One section Pack Artillery.

8 or 10 Sappers and Miners.

Civil Officer and Staff.

In order to have a mobile and handy force animals must be cut down to a minimum, and the following modifications are suggested for the various arms.

Pack Buttery.—Gun Mules, ammunition mules 5 (even first line ammunition mules might be cut down by half if thought fit), and one or two ponies should be sufficient.

If the track to be traversed is particularly bad, spare mules might be taken for heavier gun loads.

Infantry (a) Lewis Gun and first line of transport mules must be cut down to a minimum if not entirely dispensed with. In the latter case Lewis Gunners should take their places as riflemen.

(b) *Ammunition.* Each man, excepting specialists, should carry 100 rounds. There should be no reserve on mules.

If insisted on, only an absolute minimum should be allowed. A few bombs only need be carried and these, of course, should be carried on the man and already fused.

(c) *Singallers* should carry the usual 50 rounds only. No signalling mules should be taken.

(d) *Medical Arrangements.* A Medical Officer and one dresser carrying a first aid wallet should be sufficient. Neither ponies nor riding mules can be taken. A first field dressing should be issued to each man or at any rate to section commanders.

Blanket stretchers at the rate of one per platoon should be taken. Stretcher bearers should be unarmed but carry 50 rounds of ammunition. This ammunition helps to provide a small reserve. The reason for the stretcher bearers being unarmed is that whilst employed as bearers they cannot use their rifles, and if not required in that capacity they will not need their rifles.

Indian Officers should carry 50 rounds each, again so as to provide a small reserve.

A merely technical matter may be mentioned here in connection with the battery. A proportion of delayed fuse should be taken. This is not an article of peace equipment, and special X orders would have to be issued by the G. O. C. to obtain the fuse.

One inch Very lights with sufficient cartridges may come in very useful as will also red distinguishing flags (about the size of a small signalling flag). One of these flags should be issued to each platoon for the purpose of indicating its position in case gun fire has to be opened at dawn and the platoon has failed to occupy its exact position.

Sapper and Miners. A few Sappers with one mule load of explosive should be sufficient.

If the village has to be absolutely destroyed, these numbers would have to be increased.

As they will not have an Officer present, they should be placed in charge of the Pack battery.

This completes the preliminary measures and brings us to the actual operation.

B (1). *The Concentration.*

Secrecy in initiating the raid, the rough composition of the force and the necessity of extreme mobility have been dealt with. These all combine to bring out the fact that *surprise* is the great essential. This can usually be attained by a night march.

Troops should proceed as far as possible in lorries or by train. Mules should be marched without saddles or loads and some plausible excuse given to the drivers for their movement, such as remounts on transfer to another battery or corps.

As regards the lorries, in calculating the time for a lorry convoy, it is not safe to count on a convoy of from 30 to 40 lorries travelling at more than 10 miles per hour by day and at half that rate by night, and to this must be added the time required for 'enbusing' and 'de-busing'.

A 3-ton lorry will accommodate from 25 to 30 men fairly easily. Men should 'enbus' carrying equipment, not wearing it.

If the troops are not to return to barracks for 48 hours, blankets will be necessary. One man per lorry should be detailed to look after blankets and food. These men act as a lorry guard. A point that must be remembered is that the important loads such as guns, gun ammunition and saddlery, etc., should not all be concentrated in one lorry, as a breakdown of a particular lorry may involve a long wait and so completely upset the timing of the operation. An additional reason is that if boat bridges have to be crossed, a heavily loaded lorry may have to be unloaded and reloaded on the further side.

Steps must also be taken beforehand to ensure that each lorry possesses at least one good oil lamp.

Finally, see that the lorry convoy is accompanied by M. T. Officers who are experts at managing convoys and who should take charge until the convoy work is completed.

B (2). Approach march.

(a) Having concentrated the force, the approach march will take place. This will almost invariably be a night march or you will not get surprise.

As this night march may be anything up to 20 miles, and is usually carried out in very hilly country with no roads, the stereotyped advanced, rear and flank guards are impracticable. If they were indulged in the column would never get to its destination. All that can be done is to send out a few men in file ahead of the main body with the guides.

(b) Formation of main body.

In spite of any orders that may be issued to the contrary, the column, after a few miles and as soon as the track has got really bad, will invariably be moving in file or single file. So it is better to commence the march with men in file and animals in single file.

(c) Halts.

Halting at specified times is useless. The guides will often be at fault and will cause a halt until they have picked up their bearings again.

The order should be that the force will halt until closed up after a bad piece of ground or whenever occasion offers.

(d) Lights.

All the usual precautions regarding lights, smoking and talking must be rigidly enforced.

An electric torch in the hands of a reliable person may however save endless time in searching the side of a nullah for a good way down for transport.

(e) Distinguishing badges.

All officers should be conspicuously marked.

(f) Keeping touch.

A useful method of keeping touch on very dark nights is for each man to hold on to the bayonet scabbard of the man in front,

(g) Time and space.

In calculating time and space details for a night march of this description at least an hour should be allowed for the deployment and an extra hour for unforeseen occurrences, such as loss of direction, difficulty of route, etc. On a really dark night it is not safe to calculate on doing more than $1\frac{1}{2}$ miles per hour.

If reports are received during the course of the march, as will often be the case, that a party of men or a mule has gone astray no delay beyond a brief halt can be allowed. It is impracticable to commence searching for the missing details on a dark night, as the delay occasioned may jeopardise the success of the whole operation by causing the column to arrive late at its objective. If all ranks know that search parties will not be sent out under any circumstances whatever, they will make far greater efforts to keep touch.

(h) Road picquets.

Should it be necessary to drop picquets for protection during the return journey, the proceeding will be the same as by day, except that these picquets will remain on or near the track until it is light enough for them to move up into a suitable position. They should be told at about what time the column may be expected to return and should be warned above all things not to attract attention to themselves.

B(3). Deployment.

The position of deployment should be selected well away from the objective, say, at a distance of a mile.

In the dark exact positions to be occupied by units cannot possibly be pointed out. The most that can be done is to tell a company or platoon commander that the objective lies in such and such a direction and that he is responsible for surrounding it on the east or west as the case may be.

The various units then move off in succession, boots or chaplis being removed if necessary.

The guides, of whom there should be four or more, will often have a very good idea as to how the objective may best be surrounded and may be able to lead units to their positions,

As dawn breaks the guns should move up into their positions. The closer these are, within reason, to the objective the better. Trans-border men have a wholesome fear of artillery fire which they cannot get away from and the sight of guns placed in threatening positions near their village will be far more effective in helping them make up their minds than any amount of Infantry.

B(4) *The attainment of the object.*

Once the village has been successfully surrounded and it is fairly light, the Political Officer and his staff should get to work. Every picquet commander should have been previously informed that a really successful operation is one in which the enemy finds himself so completely dominated that opposition is useless. Fire must be withheld for two good reasons :—

- (a) If shooting begins villagers are naturally nervous of coming out of their houses. This greatly increases the difficulties of the Political Officer and valuable time is wasted.
- (b) Once across the border, the sound of firing will cause the chighas of neighbouring villages to turn out and the return journey may be harassed.

The Political Officer calls upon the village maliks very often known to him personally, to come out and surrender themselves and their outlaws, giving them the alternative of their village being shelled without the opportunity to remove the women and children.

After the terms have been complied with, the troops enter the village and such houses as have to be destroyed are burnt and towers blown up. In carrying out a search it is advisable to post men on the roofs of houses which command a good view to act as police and prevent occupants from running from one house or courtyard to another.

It is also a good plan when searching houses to send a couple of villagers into every house immediately in front of the search party. Should the inmates prove truculent their own friends will get the benefit of the first shot and the troops will know what to expect.

The search having been concluded and any necessary destruction carried out, the withdrawal is carried out as rapidly as possible in the normal manner.

B (5). Withdrawal.

The withdrawal should be commenced in the usual manner, platoons being sent back to take up picquets positions along the route if none have been dropped on the forward journey.

If a section of guns form part of the force, these should act separately, one being sent well back to take up a position before the retirement takes place.

Prisoners should be sent off under their guards as soon as the route has been secured. The retirement when once begun, should be carried out with all speed. No firing should take place and, even if a few enemy commence long range fire, no notice should be taken of it, and the withdrawal should not be delayed for a second in order to return this fire. A really quick withdrawal for the first few miles may prevent the force being followed up.

CONCLUSION.

In carrying out raids or reprisals of the type outlined great risks are undoubtedly run. No reserve ammunition to speak of, no medical arrangements, no protection during the night march, etc., etc. But we are merely applying the trans-border man's methods and, provided the strictest secrecy is maintained and the force can be made really mobile, there is no reason to suppose that our adoption of his methods should meet with any less success than he has experienced in the past.

To complete a successful raid, i. e., one in which not a shot is fired, in addition to secrecy and mobility there must be some tangible show of power when the force has arrived at its objective. The sight of guns commanding their village, and the knowledge that at a stated time these guns will open fire, unless the terms are accepted, will produce a moral effect which infantry alone cannot obtain.

A perfectly carried out raid will be a bloodless one.

This will convince the trans-border man that we are able, at any time, to enter their country and inflict punishment without material loss to ourselves. The sooner they thoroughly understand this the better for all concerned.

"CRECY AND POITIERS"

BY

MAJOR H. WILBERFORCE-BELL.

Assistant Resident, Aden.

THE wars of the 14th century waged in France against Edward III, when that monarch claimed the French throne, have been overshadowed in some degree by the various continental struggles of much greater dimensions which have since taken place. But to the student of English military history they are still of absorbing interest, and a short study of the battles of CRECY & POITIERS—names familiar to every English schoolboy—and of the events which led up to them, is not inappropriate when we are, as at present, wallowing in the after effects of battles infinitely greater, infinitely longer, and fought all over the world. With all differences considered we must realise that similar hopes and apprehensions stirred the hearts of the 14th century English and French warriors and statesmen. The wars of that time differed from our last great war only in degree, and it is likely that the English-speaking peoples will know of the names of CRECY and POITIERS when the name of many a greater battle fought nearly six centuries later will survive only in military works or in detailed histories, which no one will read.

The writer found opportunity recently to visit the two battle-fields of CRECY-EN-PONTHIEU, near ABBEVILLE, and MAUPERTUIS, near POITIERS, for it is by these names that the French call the two battles which form the subject of this article. The two places are far apart, and the fields differ in nearly every particular; but the writer found one thing in common concerning them, namely that the local inhabitants knew of no battle which had ever been fought there!! French "amour propre" is a thing which the English do not much understand. Would that it were otherwise, for then one of the principal causes which operate against

a real friendly understanding between the two nations would disappear.

King Edward III had scarcely succeeded to the throne of England when his uncle, the king of France, died. He claimed the throne of France in right of his mother, but the claim was not upheld by the French Peers and Philip VI was chosen to be their head. For more than ten years Edward III acquiesced, though not abandoning his claim, but when Philip VI began actively to assist the enemies of the English, the king thought it time to advance once more his claims—this time by force of arms—and in 1346, on July 12th, he landed with a large army at CAPE LA HOGUE. The English command of the sea made this landing possible, and here may be seen a condition of English warfare on the continent, afterwards many times to be repeated.

The English army was a feudal force, collected by noblemen and knights as the price of the tenure of their possessions. It was not a homogeneous body as we now understand an army to be, but it was thrown haphazard together, being roughly classified into the three divisions of men-at-arms, archers and light infantry. The French army, organised also on a feudal basis, was composed of men-at-arms, 15,000 Genoese archers, using the cross bow which was introduced to counterbalance the English long bow, and a horde of ill-fed peasantry, who, armed only with knives and bill-hooks, were of very little value until victory should be secured. The English army, or at any rate its leaders, possessed one great advantage over its enemies in that it had profited by experience.

BANNOCKBURN was the beginning of the end of "shock" battles, and that unfortunate fight with the Scots taught the English that mere valour would not in itself secure victory unless backed up by much careful thought. Accordingly in the years that followed the wars with the Scots the English had developed their archers and long-bow men, until they became the deciding factor in a fight.

The English long bow was a formidable weapon. It required years of practice for the archer to become proficient in its use

and French efforts at having a similar "arm" proved vain, as the more muscular Eenglishman only could manipulate it. The bow required great strength to bend as well as great skill. It is not known whether the point of the bow rested on the ground or was held out at arms length, but it is clear that the long bow, having the thickness of a man's forearm at its thickest part, postulated the possession of muscle and brawn, as well as the acquisition of knack in their application. We find references to the expression "to get down into one's bow" in the middle ages, and this suggests that when an arrow was discharged one tip of the bow rested on the ground. A good archer could keep three arrows in the air at the same time, and an arrow, being metal-tipped, could go clean through an oak plank one inch thick at one hundred yards range. The average range of employment was a furlong, but an arrow was effective at 400 yards range, which the term "bow-shot distance" was used to indicate.

A single suit of armour was useless as a protection against the arrow discharged from this formidable weapon and the French knights at POITIERS—and probably at CRECY too—wore chain mail as well as ordinary armour. Consequently a charge involved, at the quickest, no more rapid pace than a trot, and bowmen had plenty of time in which to do sufficient execution by killing the horses to rout a charge long before it became effectively dangerous. To cope with the long bow the French at CRECY employed Genoese cross bow-men. They proved a complete failure, and the 15,000 unfortunate Genoese were slaughtered almost to a man in the battle. In consequence of this disastrous experiment they were not again utilised when fighting against the English.

King Edward's object in landing in France on the left bank of the SEINE has never been satisfactorily explained. When too late he found that all the bridges over the river, by which he might hope to "make" CALAIS, had been broken by the French, and so he marched up the SEINE towards PARIS unopposed, thereupon waiting until a bridge had been repaired over the river, and ravaging the country round PARIS. On August

Crecy and Poitiers.

16th the bridge was finished and the English crossed it and headed for CALAIS. A week later they arrived before ABBEVILLE. By this time the French king had assembled about 100,000 men, an army three or four times greater than the combined English forces. It thus became imperative for King Edward to cross the SOMME and to place that river between himself and the French. Here occurred his first piece of luck in the battle which was to follow, for a peasant guided him to the ford at BLANCHETAQUE, some miles below ABBEVILLE, and he had scarcely crossed the river when the French army came up, but were prevented from pursuing him by a rising tide. Edward III now had time to decide what to do, and on the 25th August he took up a strong position on high ground in front of CRECY village and there waited his pursuers.

The English army was divided for the fight into three "battles", each consisting of about 800 men-at-arms and 2,500 archers, and in addition a force of 30,000 Welsh infantry was apportioned among them. These Welshmen, recruited by King Edward, had enlisted for the war, and when they had arrived at the place of assembly, were very nearly stark naked. The King ordered each man to be provided with a leather jerkin, which so pleased them that their ardour became turned into devotion, and they played a great part at CRECY. The "battles", or divisions, were commanded by the Black Prince on the right, by the Earl of Northampton on the left, and by the King himself in reserve, respectively. Horses and carts were parked in rear, but a number of carts were strung out on the left flank of the line, at right angles to it, in which were placed archers. These archers were intended to put down a "barrage" after the French attack had been launched, and is the first instance known in history of these tactics being employed. While the Genoese were trying conclusions with the English archers the rain of arrows behind them prevented the men-at-arms from advancing to their support.

The English position at CRECY was very strong. On the right of it flowed the river MAYE, then a more formidable

English
French



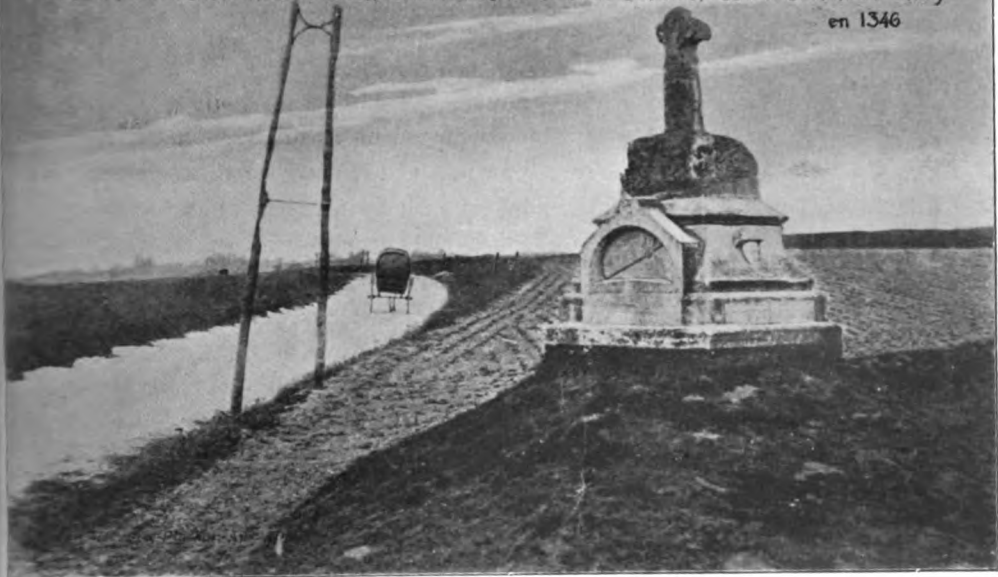
stream that now, and beyond that was forest and thick undergrowth. On the left lay the village of WADICOURT, standing on high ground, and easily defensible in those days. The line ran along the crest of the hill, and the King's headquarters were in the famous windmill near the right flank, and between the Black Prince's "battle" and the reserves. The windmill existed until about 40 years ago, and even now its foundations can be seen. They are of red brick, of a strength not usually seen nowadays, and of the type employed in Elizabethan architecture.

When the French army, worn out by forced marches, and badly fed, arrived on August 26th opposite their foe, the French commander decided, in spite of the heavy rain which had fallen, to attack at once that evening. Their army formed up in battle array, the Genoese bowmen being in the van, and the men-at-arms in the second line. The horde of half-famished peasantry was echeloned on the right flank. The battle opened with the advance of the Genoese upon the English line, but they never got to grips. They fought with the light of the declining sun in their eyes and they were further handicapped by having their crossbow strings wet. The English bow strings had been kept dry, by the simple expedient of carrying the bows in leather cases. The sun, the condition of the bow strings and the fatigue of the French army more than neutralised their great superiority in numbers.

The Genoese were soon engaged with the English archers, and, when the battle was joined, the archers in carts before WADICOURT put down a barrage which broke the French cavalry charge long before it reached the English line. Long-bow arrows rained upon the French men-at-arms, and they shared the fate of the hapless Genoese, whom they had been ordered to ride down for cowardice. The battle was nearly lost when the mass of peasantry was ordered up on the French right flank, and now also occurred King John of Bohemia's final charge. He was blind, and ordered two of his esquires to tie their horses reins to his, one

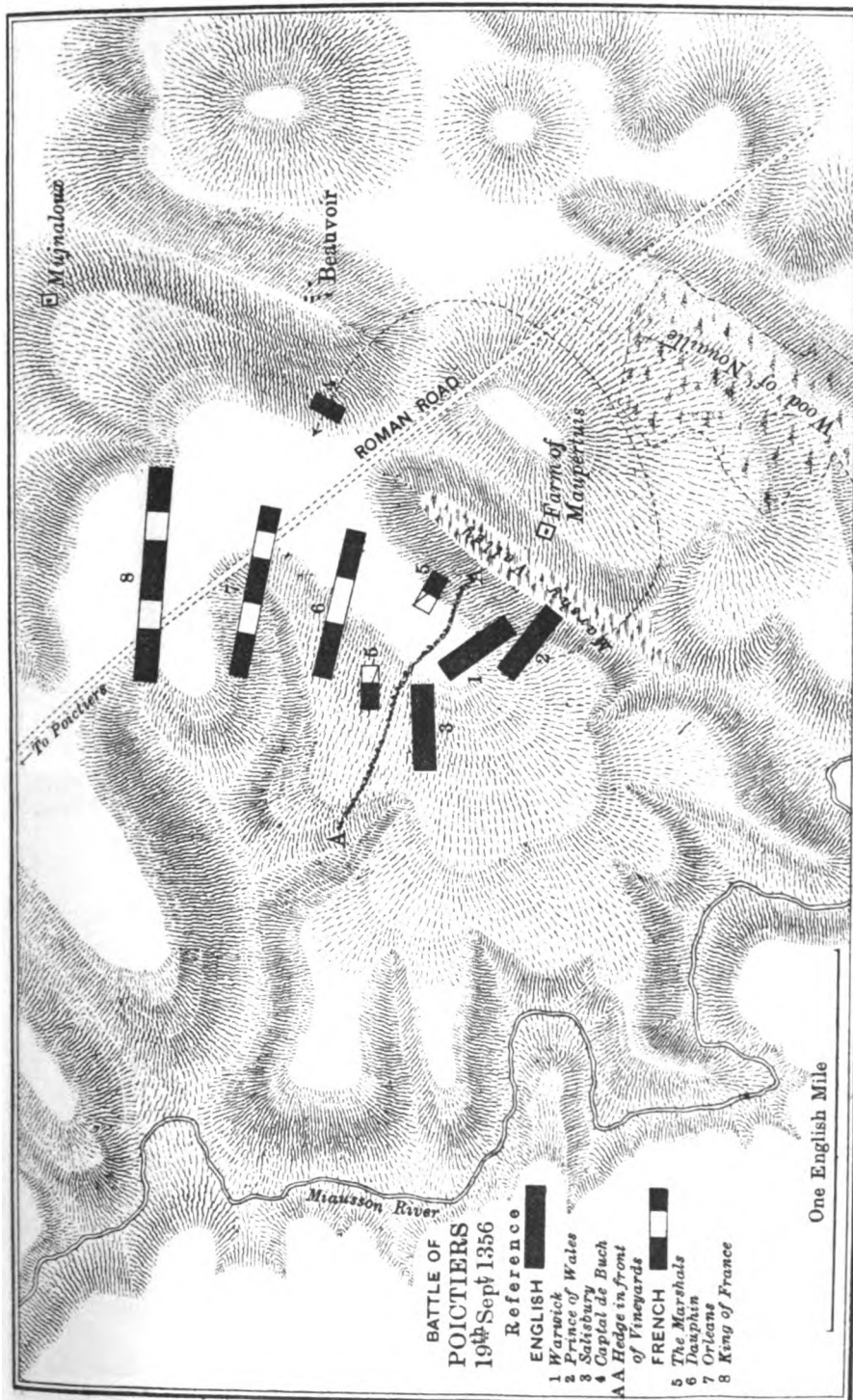
on either side of him, and to advance upon the English. They did not get far before they were all brought down by arrows. The King's body was afterwards found, and placed in the chapel of a religious order near CRECY. The building now forms part of some farm buildings. The turn of the Welsh infantry came at nightfall, when they fell upon the ill-armed peasantry and the wounded, and when morning dawned the roll of dead French knights and men-at-arms was found to be nearly 5,000. About 40,000 French fell in the battle, and there would appear to have been no wounded left alive by the savage Welshmen. A great battle had been lost and won. The place whence the King of Bohemia set out upon his last charge is commemorated at CRECY by a monument, which is to be seen about a mile from the English position, on the road from CRECY to ESTREES LES CRECY. The present cross is not the original erection. In CRECY village has been erected comparatively recently a memorial to the gallant Frenchmen who fell on that day. It stands in the market place, and the site must have witnessed many stirring scenes in those August days of long ago. The English army, after the battle, reached and captured CALAIS, and a truce put an end to further fighting for a while. Three years after Philip VI died. Although King Edward and the English had returned to England, his claim to the throne of France was not withdrawn, and in 1356, the King of Navarre offering him assistance, he decided again to send an army into France. This time he did not go himself, but placed the Black Prince in supreme command. The expedition landed at BORDEAUX, and worked northwards, without any apparent object, as far as VIERZON. The army consisted of scarcely 10,000 men and when the King of France heard of its plundering operations he hastened to CHARTRES and began collecting his forces. The Black Prince moved westwards to TOURS, but when he heard that the French were crossing the LOIRE at BLOIS, he hastened south, fearing the overwhelming numbers of his opponents, who exceed 40,000 men. On September 17th 1356, neither commander knew for certain where his opponent was to be found, and the Black Prince, in his perplexity, sent out a small

CRÉCY-en-PONTHIEU — Croix restaurée du roi Jean de Bohême, tué à la bataille de Crécy
en 1346



CRÉCY-en-PONTHIEU — Le Moulin d'où Edouard III
observa la bataille de Crécy (1346)







body of men-at-arms to obtain information. This body came unexpectedly upon the French rear guard at CHAUVIGNY, fought a short action, and then retreated upon the main body. The Black Prince decided to continue his march until he was well on the BORDEAUX side of POITIERS. On the night of September 17th 18th he was about 5 miles south east of that town, near the small plain of MAUPERTUIS, and there he selected a site, and awaited King John and the French army. Meanwhile the French, after the rear guard action at CHAUVIGNY, also turned towards BORDEAUX, and the night was passed quietly by the two armies at a distance from each other of about two and a half miles.

The position taken up by the Black Prince was very strong. Its great defect, however, was that there could be no retreat, for a river which flowed round two sides of the position was a dangerous back ground. The army was concentrated on a small hill rising by the side of the river, and separated from the plain of MAUPERTUIS by a bog. In 1356 it had some low brushwood upon it, and the trees which now cluster the hill were then non-existent. Thus on two sides of the position was a river, and on the other two sides marshy land, which has since been drained. The only means of reaching the hill was by a small partly, sunken road, which branched off from the old Roman road from POITIERS to LIMOGES, and led through the marsh on the north side, over the hill, and to a ford in the river. Along the foot of the position and bordering the marsh, the English planted stakes and brushwood, thus improving their situation. On the summit of the hill, on horseback, the Black Prince, and old Sir John Chandos, the English commander, calmly awaited the onslaught of the French army.

On Sunday, September 18th, the French King took up his position on the site of the present CHALET DE MAUPERTUIS, opposite the English. At the last minute the idea arose that a bargain might be struck with the Black Prince, and so the whole of the day was passed in negotiations, but they proved fruitless, and early next morning the battle began. Remembering the disaster at CRECY 10 years earlier, King John suggested that the

knights should attack on foot. Many did so eventually, but a body of German knights who were fighting under the French king's banner declared that no gentlemen ever fought on foot, and that they would not depart from this custom. They promptly put themselves in order of battle, and cantered down the sunken road upon the English position. Of their number four knights actually got through the English line, and the fate of these four is interesting. One was shot in the back by an archer who turned round and loosed an arrow at him. A second went on further, until he was killed by a man-at-arms. A third made straight for Sir John Chandos, who killed him with a mace; while the fourth was despatched by the Black Prince, who struck him through the throat with his sword. The German knights were followed by other French knights, with the result that numbers were killed on the narrow road, and the marsh in front of the English position became a veritable shambles. As at CRECY, when armour was seen to be proof against the arrows, the horses were aimed at and when a horse was down, the rider was, for all practical purposes, "hors-de-combat". But the English supply of arrows began to run out, and as the French recoiled from the slaughter there, the archers ran out to pick up arrows and to extract them from the wounded and killed. There was, as yet, no thought of a counter-attack, and the Black Prince's prudence was well rewarded. Moreover his men were tired out. The repeated frontal attacks to which they had been subjected was a very severe test, and this strain was not lessened when they saw a French knight in the service of King Edward—Captal de Buch—ride off with a body of men-at-arms northwards from the right of the English position. Their dismay at the thought of his desertion was soon afterwards changed to relief, when the Gascon nobleman appeared coming through the French ranks in front of them, bearing the cross of St. George. He had made a valiant flank attack upon the French, and its success was the signal for the launching of a frontal counter attack by the remainder of the English men-at-arms. The hard fought day thus ended in a brilliant victory. The French broke and fled towards POITIERS, pursued by the English bill-men, and the slaughter was only stayed at the gates of the city. The French King surrendered himself as a prisoner, and accompanied

the Black Prince to England, where he was lodged in the Savoy palace. Edward III did not further his claim to the whole of France, and by the Treaty of BRETIGNY the French King resigned his suzerainty over the south-west portion of the country only. But though the English had won the battle of POITIERS, they eventually lost the war, for they attempted to hold their south-western territories by means of their French adherents. The result was that before many years had passed the old adage about blood being thicker than water was verified, and English authority was driven out, and completely disappeared.

The field of POITIERS is a very interesting study. Had the French king sat down round the English position he must in a few days have starved his foe into surrender. But feudal chivalry dictated otherwise. To attack through marsh land with heavily armoured cavalry was the very height of folly, and the Black Prince's choice of the position was no doubt assisted by his knowledge of the impetuous character of his opponents. It is remarkable that excepting for trees upon it, and the draining of the marsh around it, the position is just as it was in 1356. Even the ruins in front of it indicate where a farm stood just near the road. On the spot where King John of France was situated during the battle now stands the CHALET DE MAUPERTUIS, which the writer found, in 1921, inhabited by a retired French Colonel to whose kindness and courtesy he owes much of the information he obtained about the battle.

A visit to such historical sites well repays the trouble taken to make it, and perhaps there are no more interesting incidents in our English history than those which we have all learnt at school to connect with the English bowmen and the Black Prince. The two battle fields above described are fairly easy to reach. In the case of save for the happy possessor of a car or motor bicycle,—it is necessary to go to ABBEVILLE, and there to take the local steam train, which reaches CRÉCY in a couple of hours. The field of POITIERS is about seven kilometres from the town, and can only be reached by bicycle or motor : but the enquirer must ask for MAUPERTUIS, otherwise a taxi-driver will take him to the site of one of the other two great battles of history, which were fought around that most interesting town.

BIG GAME IN SOMALILAND

BY

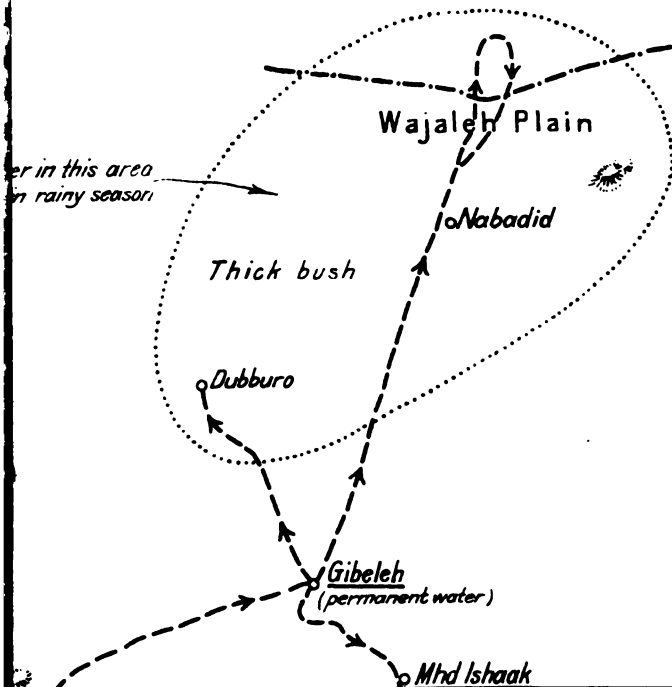
MAJOR J. KINGDON,
92nd (P. W. O.) Punjabis.

FOR many years past British Somaliland has been a forbidden land to sportsmen owing to the activities of the Mullab and his Dervishes, and the generally unsettled state of the country.

Things have now happily changed for the better, and although it is still unlikely that permission could be obtained to proceed into the HAUD or the OGADEN country, good shooting is to be had within the Protectorate at moderate expense ; and when it is realised that within a fortnight of leaving Bombay one can be actually marching and shooting in very pleasant surroundings, the possibility of a visit to Somaliland on three months' leave, from India becomes apparent, and my experiences during a shooting trip there in the autumn of 1920 may be of interest.

As the small steamer which plies between ADEN & BERBERA approaches the Somali coast the outlook is anything but inspiring. An expanse of sandy desert, gently sloping inland from the shore and relieved only by ranges of barren hills, meets the eye ; and in the distance the faint outline of the GOLIS mountains. But once the maritime plain with its sand and stunted scrub has been crossed an almost magic change takes place, and the traveller finds himself in a country of wide spaces, with a pleasant climate always tempered by cool breezes. This upland plateau stretches southwards for miles to the open grass plains which lie on the distant borders of ABYSSINIA, and forms a vast hunting ground over which the sportsman can wander at his own sweet will in search of game. In deciding at what time of year to visit Somaliland it must be remembered that the all-important question is that of water. The rains fall on the interior plateau during the

A B Y S S I N I A



BIG GAME IN SOMALILAND

BY

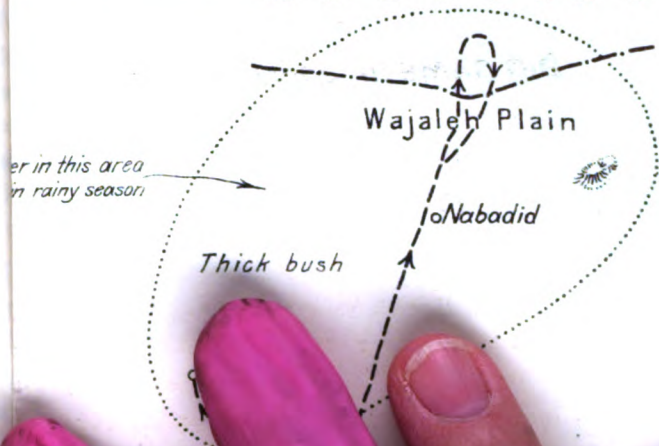
MAJOR J. KINGDON,
92nd (P. W. O.) Punjabis.

FOR many years past British Somaliland has been a forbidden land to sportsmen owing to the activities of the Mullah and his Dervishes, and the generally unsettled state of the country.

Things have now happily changed for the better, and although it is still unlikely that permission could be obtained to proceed into the HAUD or the OGADEN country, good shooting is to be had within the Protectorate at moderate expense ; and when it is realised that within a fortnight of leaving Bombay one can be actually marching and shooting in very pleasant surroundings, the possibility of a visit to Somaliland on three months' leave, from India becomes apparent, and my experiences during a shooting trip there in the autumn of 1920 may be of interest.

As the small steamer which plies between ADEN & BERBERA approaches the Somali coast the outlook is anything but inspiring. An expanse of sandy desert, gently sloping inland from the shore and relieved only by ranges of barren hills, meets the eye ; and in the distance the faint outline of the GOLIS mountains. But once the maritime plain with its sand and stunted scrub has been crossed an almost magic change takes place, and the traveller finds himself in a country of wide spaces, with a pleasant climate always tempered by cool breezes. This upland plateau stretches southwards for miles to the open grass plains which lie on the distant borders of ABYSSINIA, and forms a vast hunting ground over which the sportsman can wander at his own sweet will in search of game. In deciding at what time of year to visit Somaliland it must be remembered that the all-important question is that of water. The rains fall on the interior plateau during the

A B Y S S I N I A





months of June, July and August. But the end of September or middle of October at latest water is becoming scarce in a normal year and movement becomes curtailed. During the rains, when violent thunder storms flood the country, camp life is not so pleasant as in the winter months, but on the other hand the grass is plentiful and on the open plains such as WAJALEH and TOYO the game is more in evidence than later on in the year.

On arrival at BERBERA the first task is to engage hunters and personal servants and hire camels to carry kit and stores: for this the assistance of the District Commissioner must be evoked. The system of hiring camels is much more satisfactory than buying them and having to sell again at a loss at the end of a trip. In my own case the thirteen camels which formed my caravan accompanied me throughout the three months I was shooting and although we covered over 400 miles of country the bill for their hire only came to Rs. 700 which cannot be called excessive. These hired camels have their own Somali attendants, who do all the loading and grazing of the beasts and are always cheerful and willing to do odd jobs in camp and on the march in return for a small present at the end of the trip.

The shooting license costs Rs. 300. It is issued by the District Commissioner at BERBERA and entitles the holder to shoot the following:—

Lion	...	...	...	3
Greater Kudu	...	...	...	1
Lesser Kudu	...	...	...	2
Swayne's Hartebeeste		...	...	2
Oryx Beisa	...	...	...	2
Soemmering's Gazelle		...	...	3
Clarke's	"	...	...	3
Waller's	"	...	...	3
Speke's	"	...	...	3
Pelzeln's	"	...	...	3
Beira	"	...	...	2
Ostrich (male)	...	...	...	1

Big Game in Somaliland

Dik-dik	...	...	... 20
Cheetah	...	...	... 2

An additional head of certain species can be shot on payment of an extra fee : leopard and wart-hog are unlimited. The close season is from the 15th March to the 15th June (both dates inclusive). There is still one herd of elephants in British Somaliland, but luckily they are strictly preserved ; they roam over the district to the north of HARGEISA and their old tracks are always being met between that place and MARODILEH. They feed almost entirely on the fibrous stalk of the aloe which is plentiful all over the country.

When camped near MARODILEH in December 1920 this herd passed close to the zariba one night and we tracked them next morning in the hope of getting some photographs. It was however a dull morning and, as the herd was in shady bush, the results were not good. There were at that time six elephants two of which were bulls, with very poor tusks. They were all plastered over with red mud.

The game in Somaliland was, as a whole, far more plentiful than I had expected to find it ; and considering the vicissitudes through which the country has passed during the last ten years, and the number of rifles and amount of ammunition in possession of the Somalis, there is still plenty to shoot and prospects of sport in future years are good. For example, oryx beisa were more numerous on the open plains to the west BULHAR in January 1921 than they had been in 1912, while greater kudu were common on nearly all the hills in the Western District and there was a high average of shootable heads.

Lions seem to have increased but, as is always the case with bush-dwelling lions, are not easy to bag. They travel great distances for water and are far from certain in returning to their kill.

In 1920 a lion and lioness killed two cows one night at a Somali karia (village) close to our camp. We tracked them for three hours next morning and came up with them in some very thick bush. It was, unfortunately, a cold morning with a thick

mist and the lions had not settled down for the day : they heard us coming and I only caught a glimpse of the lion as he made off at a trot some 200 yards away. They climbed into some rocky hills where we soon lost their tracks. I hoped however that as they had not been seriously disturbed they would come back to the kills that night, so a zariba was built near the body of one of their victims and a sentry posted to keep off vultures. We spent all night over the kill but the lions failed to return. We afterwards learnt that they had gone that night to a water-hole ten miles away in the opposite direction ! Lion still exist within 30 miles of the coast and there is one place within two marches of BULHAR where there are always three or four, but they are very cunning.

In most places lions can be tracked, put up from the shelter of some shady bush, and shot on foot ; and in these circumstances there is no more thrilling sport. It is generally a case of quick and accurate shooting at close quarters. Between HARGEISA and the coast they usually lie up for the day in dense reeds in the dry river beds which are a feature of the country : from these they can sometimes be burnt out.

A third method is to sit up at night in a small and strongly built hut of thorn bushes with a live donkey tied up just outside as a bait, and a loophole to shoot through. This is exciting enough when a lion comes along, since the terrific roar with which he springs upon the unfortunate donkey is enough to shake the nerve of the coolest ; but it is on the whole a poor way of shooting so fine a beast.

The greater kudu is a truly grand animal and the best trophy to be obtained in Somaliland. The bulls stand between 4' 6" and 5' at the shoulder. The horns curve in a magnificent spiral and are very massive ; they attain to a length round the curve of 60 inches, but in Somaliland a head of 48 inches and over is good. Being essentially a hill-dweller, the greater kudu is seen to perfection in the scenery it inhabits, and to my mind kudu hunting is the cream of sport,

Big Game in Semalland

One must be out on the hills soon after dawn and moving carefully along the highest ground below the sky-line examine the hill sides and valleys with field glasses. For so large an animal the kudu is very hard to spot and his protective colouring is wonderful: often the first indication one has is the rattle of stones on a distant hill-side, the glint of the sun on horns, or the deep grunt which announces that the game is on the alert.

If your hunters know the ground it is often much easier to get a shot at a wily old bull by sending one or two men to drive him towards you. It was in this way, after five days unsuccessful stalking on the hills, that I shot my kudu on 15th December 1920. We had been after a herd on the hills and on regaining more level ground we spotted a pair of big spiral horns showing above some thick cover two hundred yards away. As the wind was unfavourable for a stalk we crawled to the shelter of some bushes between the kudu and the hill and sent one man round to move the beast towards us. To my surprise no fewer than six bulls, all carrying shootable heads, broke cover and galloped slowly in our direction. One head was well over fifty inches but, as luck would have it, this big one with three others held straight on past us towards the hill and never gave me a chance. The other two, however, passing to the right, stood on some open ground two hundred yards away and I shot the bigger of the two. The measurements of this head were:—

Round curve	...	...	49 inches.
Straight	...	...	35 "
Tip to tip	...	...	31 "
Girth at base	...	...	10 "

So large a gathering of males all carrying good heads was a very unusual sight. They had probably come down from the hill to feed on the seed-pods of a species of acacia, and, in fact, the ground beneath one of these trees was ploughed up with their tracks.

Lesser kudu, as the name implies, are really a miniature edition of the greater, the male standing some 3' 6" at the shoulder,

They inhabit dense shady bush on level ground especially favouring thick cover which is found in the dry river beds throughout the country. They are common at ARMALEH, along the foot of the GOLIS Mountains, and throughout the Western District.

I was fortunate enough to get the two allowed on the license with little trouble; their heads measured 29 and 28 inches (round the curves) respectively, a good average for Somaliland. In the thick bush they inhabit it is difficult to judge a lesser kudu head, but by moving very slowly and quietly and following fresh tracks it is not difficult to obtain an easy shot at close range at these beautiful antelope.

The Swayne's Hartebeeste is now comparatively rare and is only found on the WAJALEH Plain on the borders of ABYSSINIA. Owing to the fact that the water-holes in this neighbourhood had all dried up by the end of October 1920 we had to make a flying visit from our main camp at GIBELEH, travelling light and carrying a minimum allowance of water. The grazing on the plain was so scanty that only one herd of seven Hartebeeste was seen, from which after a lot of hard work, I got a male with 16 inch horns. Like all Hartebeeste the Swayne's has a very long and narrow skull, high withers and very sloping quarters; their coat is a beautiful dark chestnut, old males being almost black.

A fine antelope is the Oryx Beisa, standing about 4 feet high at the shoulder. The horns are nearly straight and taper gradually to a point. Both sexes carry horns, those of the female being more slender but often longer than the males. Oryx Beisa are found both on the open plains and in bush, generally in small herds of from five to ten, and sometimes in much greater numbers. They are to be found within a short distance of the coast to the S. W. of BULHAR, and during the last week of my trip in January 1921 I shot two (32 and 31 inches) within 15 miles of the sea.

Soemmering's Gazelle are plentiful, and two were shot on the WAJALEH Plain in November 1920, one of 18½ and the other of just over 17 inches. This gazelle is slightly larger than the Indian blackbuck, and is of a pale fawn colour with a conspicuous white

Big Game in Semalland

One must be out on the hills soon after dawn and moving carefully along the highest ground below the sky-line examine the hill sides and valleys with field glasses. For so large an animal the kudu is very hard to spot and his protective colouring is wonderful: often the first indication one has is the rattle of stones on a distant hill side, the glint of the sun on horns, or the deep grunt which announces that the game is on the alert.

If your hunters know the ground it is often much easier to get a shot at a wily old bull by sending one or two men to drive him towards you. It was in this way, after five days unsuccessful stalking on the hills, that I shot my kudu on 15th December 1920. We had been after a herd on the hills and on regaining more level ground we spotted a pair of big spiral horns showing above some thick cover two hundred yards away. As the wind was unfavourable for a stalk we crawled to the shelter of some bushes between the kudu and the hill and sent one man round to move the beast towards us. To my surprise no fewer than six bulls, all carrying shootable heads, broke cover and galloped slowly in our direction. One head was well over fifty inches but, as luck would have it, this big one with three others held straight on past us towards the hill and never gave me a chance. The other two, however, passing to the right, stood on some open ground two hundred yards away and I shot the bigger of the two. The measurements of this head were:—

Round curve	...	...	49 inches.
Straight	...	...	35 "
Tip to tip	...	...	31 "
Girth at base	...	...	10 "

So large a gathering of males all carrying good heads was a very unusual sight. They had probably come down from the hill to feed on the seed-pods of a species of acacia, and, in fact, the ground beneath one of these trees was ploughed up with their tracks.

Lesser kudu, as the name implies, are really a miniature edition of the greater, the male standing some 3' 6" at the shoulder,

They inhabit dense shady bush on level ground especially favouring thick cover which is found in the dry river beds throughout the country. They are common at ARMALEH, along the foot of the GOLIS Mountains, and throughout the Western District.

I was fortunate enough to get the two allowed on the license with little trouble; their heads measured 29 and 28 inches (round the curves) respectively, a good average for Somaliland. In the thick bush they inhabit it is difficult to judge a lesser kudu head, but by moving very slowly and quietly and following fresh tracks it is not difficult to obtain an easy shot at close range at these beautiful antelope.

The Swayne's Hartebeeste is now comparatively rare and is only found on the WAJALEH Plain on the borders of ABYSSINIA. Owing to the fact that the water-holes in this neighbourhood had all dried up by the end of October 1920 we had to make a flying visit from our main camp at GIBELEH, travelling light and carrying a minimum allowance of water. The grazing on the plain was so scanty that only one herd of seven Hartebeeste was seen, from which after a lot of hard work, I got a male with 16 inch horns. Like all Hartebeeste the Swayne's has a very long and narrow skull, high withers and very sloping quarters; their coat is a beautiful dark chestnut, old males being almost black.

A fine antelope is the Oryx Beisa, standing about 4 feet high at the shoulder. The horns are nearly straight and taper gradually to a point. Both sexes carry horns, those of the female being more slender but often longer than the males. Oryx Beisa are found both on the open plains and in bush, generally in small herds of from five to ten, and sometimes in much greater numbers. They are to be found within a short distance of the coast to the S. W. of BULHAR, and during the last week of my trip in January 1921 I shot two (32 and 31 inches) within 15 miles of the sea.

Soemmering's Gazelle are plentiful, and two were shot on the WAJALEH Plain in November 1920, one of 18½ and the other of just over 17 inches. This gazelle is slightly larger than the Indian blackbuck, and is of a pale fawn colour with a conspicuous white

patch on the rump, the horns are loyrate, curving inwards and slightly forwards at the tips. They inhabit open plains and are sometimes to be seen in herds of forty to fifty.

Waller's Gazelle (Gerenuk) is common throughout the country. Its main characteristic is an abnormally long and giraffe-like neck; the horns are very massive in comparison with the size of the skull which is long and narrow. A good average head measures 14 inches.

One evening at MARODILEH we stalked within twenty yards of a herd of seven of these gazelle which were feeding in light bush. It was interesting to watch them standing up on their hind legs and resting their forelegs on a branch in order to reach the higher leaves of the bushes. When alarmed they move off at a trot with heads held low and their long necks stretched out. Gerenuk are often difficult to approach at first, but by the exercise of a little patience in following them it is generally possible to get an easy shot sooner or later.

Clarke's Gazelle is peculiar to Somaliland and does not exist in the Western District. It is found in the HAUD and in certain localities in the AIN and NOGAL valleys.

Pelzeln's and Speke's Gazelles are common everywhere. The former inhabit a zone stretching from the coast to some thirty miles inland, and the latter interior. They favour open stony plains and are very similar to the Indian chinkara, the horns being almost identically the same. Average heads are 13 inches for Pelzeln's and 10 inches for Speke's.

Beira is another species which is found only in Somaliland and it is worth while spending time in obtaining one. They live entirely on flat topped stony hills and the herds nearly always remain in one locality. This little antelope stands about two feet at the shoulder and its coat is of a peculiar greyish fawn colour. The ears are very large. When standing still their colour blends so well with the dried up scrub of the hills that even at close range they are practically invisible. From my personal experience with the beira I think the best way to obtain a shot is to have the herd driven.

The horns are straight and never exceed 44 inches in length.

The klipspringer is common on the Golis Mountains and is found on exactly the same ground as the greater kudu. The horns are very similar to those of the beira and not really worth having as a trophy in the case of so common an animal as the klipspringer.

Leopards are very numerous throughout the country and do a great deal of execution among the Somalis' flocks, both by day and night. They easily jump the thorn zaribas in which the sheep and goats are penned at night and return with their prey. The Somalis often surround their zaribas with a ring of small stones, having a superstition that a leopard will not cross it: but the beast does not seem to fall in with his arrangement.

Cases of man-eating leopards are not uncommon; during our time in the GIBELEH area in November 1920 one of these pests was at work and used to take small children and even grown-ups out of their huts at night. The Somali leopard is very bold even in the day time. At MARODILEH on 26th December 1920 a leopard killed three goats at two P.M. out of a flock near our camp in the space of half an hour, and I shot her over the body of the third goat at 4 P.M. There was no time to arrange any kind of shelter so we just sat behind a small bush. The beast was lying up a reed bed within thirty yards of her kill and presently came out into the open as bold as brass and was shot in the neck at about three yards' range.

Hyenas are a perfect curse in Somaliland. They are very daring at night, and all horns and other trophies must be carefully placed in trees out of their reach. One sportsman whom I knew had just returned from the WAJALEH Plain and after much trouble had shot a nice head of the Swayne's hartebeeste. The skull and horns were left outside his tent, owing to the carelessness of his hunter, and were never seen again.

A shot gun is indispensable for shooting birds for the pot. Game birds in Somaliland comprise greater and lesser bustard, guinea-fowl, francolin, sand-grouse and in some places green pigeon.

Taken as a whole the Somali is a good tracker but inclined to be too hasty. As they cannot plan where to take you on a trip it is important to gain all the advice you can from officials of the country before starting off. When once launched on your expedition it is not easy to get reliable information about game even when one has sufficient knowledge of the language to be able to understand reports at first hand and before they have been distorted by an interpreter. There are so many factors which may affect the movements of game in any particular area from day to day, such as whether rain has fallen recently or whether the place you propose to visit is being grazed over by stock. It is therefore always sound to send one of your hunters or a reliable local native to prospect for game beforehand.

The important question of rifles and other kit to be taken is a matter of individual taste: a light magazine rifle with a flat trajectory and a heavy double weapon for lion and leopard should meet all requirements. A light double-fly tent for yourself and a single fly for your servants are necessary. For the day time your men will build a shady hut of branches in which you have meals and sit and read, etc. A comfortable deck chair is a blessing after a long day.

Stores of all kinds can be bought (at a price !) in BERBERA; mine I took with me from Bombay. Very little tinned meat need be taken as the local sheep provides very good mutton. Tinned or dried fruit and vegetables are of great importance ; potatoes, onions and flour are best taken from BERBERA.

The following is a statement of the expenses incurred during my trip and represent the actual cost of three and a half months' shooting. By the courtesy of H. E. the Governor of Somaliland I was permitted to shoot on a resident's license at Rs. 50 instead of the normal charge of Rs. 300.

	Rs	A.	P.
1st class return passage by P. & O.			
from Bombay to Aden ...	540	0	0
do. from Aden to Berbera ...	70	0	0
Stores, drinks, cigarettes etc., for 4 months	700	0	0

		Rs.	A.	P.
Shooting license ...	...	50	0	0
Camel hire (13) for 3½ months	...	700	0	0
Camel men's wages	...	130	0	0
Servants wages (including 2 trackers)	...	317	0	0
Rewards to servants, trackers and camel men at end of trip	...	475	0	0
Rations for servants etc.	...	236	0	0
10% customs duty on stores	...	70	0	0
Expended locally (meat, milk, eggs, etc., rewards for "khubber")	...	1,000	0	0
Total		4,288	0	0

Two or more sportsmen shooting together would of course find their trip less expensive since so many of the items given above would be a common charge between them.

As has been noted before the climate in the interior is delightful; the nights are often cold and warm blankets should be taken. Somaliland is often spoken of slightlying as a howling wilderness, but this is far from being the case. There is a sense of freedom in being able to wander through the bush and over the vast spaces of this wild country, which ever calls to those who have once visited it.

CURRENT MILITARY LITERATURE:

The *Army Quarterly* holds pride of place with ease among military magazines. It is best as a rule in its Editorial and in its notices on books, British and Foreign. One of the most interesting of the reviews in the July number is that on Sir Eyre Coote with a preface by General Sir Charles Monro. Of the articles, "A Defence Ministry and a Strategic Staff" by two Sapper officers is excellent; and it is difficult to pick a hole in the conclusions they reach. There are some useful notes on Military History for the forthcoming promotion examinations. "Notes from a student's scrap book" are rather poor; and it is very difficult to agree with the writer of "The German test of Victory" when he classes such battles as Spicheren, Colombey-Nouilly, Vionville-Mars-la-Tour and Gravelotte as drawn battles. Attention is drawn to the rules for the Bertrand Stewart Prize.

In the *Journal of the R. U. S. I.* the articles most worthy of note are: the Gold Medal Prize essay by Flight-Lieut. C. J. Mackay on "The Influence of the future of aircraft upon problems of Imperial defence"; a lecture by Lt.-Col. F. W. Barron on the new responsibilities of the British Empire, in which a good deal is said of the strategic relation of Mesopotamia to India; and Archibald Colbeck's "Reflections on Sir Julian Corbett's Official History," which treats largely of the Dardanelles operations.

Maj. General Sir Alfred Knox's book, "With the Russian Army 1914-1917," contains the best account of the operations in Russia that has yet appeared in the English language. The diary form which is adopted enables one to obtain as intimate understanding, perhaps, of personalities and conditions in Russia, but, from the military students' point of view, it renders the book unnecessarily long and is generally a bar to

a broad comprehension of events. The book which is in two volumes is well written, well illustrated and well supplied with maps.

The June number of the American "Review of Reviews" contains the usual article on international affairs by Frank Simonds. It is entitled "The Battle of Genoa". His view is that the only winner at the conference, if winner there was, was Soviet Russia. "Holding to her own Red gospel, she has divided the Western world." Of much greater interest are quotations from an article in the *Yale Review* by Professor Seymour who traverses much the same ground and reaches the conclusion that "the world cannot afford an isolated France in the midst of a Europe not yet pacified.....It is of the first importance both for Great Britain and the United States that France shall join whole-heartedly in the movement for the economic recuperation of Europe". He thinks that the honest co-operation of France can only be obtained by the guarantee of security and of fair openings towards prosperity; that without disarmament, there can be no economic rehabilitation; that France naturally looks on her army as her only security as she was refused the left bank of the Rhine; as her proposal for an international army for the League of Nations was negatived; and as the Treaty of Guarantees she was promised fell through owing to America's withdrawal, and that therefore America is largely to blame for the situation. Mr. J. C. Wellever deals impartially with the subject of prohibition and comes to the conclusion that, after a three years' trial, the law has justified itself and is a boon to the State.

The *Round Table* begins with an article on "Genoa" a subject now act of date. In "The drift of American opinion" a writer lays stress on the closer friendship of America and England, on the division in Irish American ranks brought about by the Treaty and on the new doubts that have arisen as to the value of holding aloof. Incidentally it seems that some American Senators have a lack of geographical knowledge equal to that attributed to our Prime Minister. Opposition in the

Senate to the Pact centred mainly on the danger of America becoming involved in war in the event of a re-constituted Russia endeavouring to snatch Sakhalin from Japan. Senator Underwood—one of the signatories to the Pact—said, "Oh! No chance of that. It's too far away." "How far", he was asked. "Well, I never measured it on the map, but I guess it to be several hundred miles." Senator Lodge, another signatory, guessed 500 miles. Actually one can walk across to the island in winter from the mainland. There is a good article on "The Communist experiment in Russia" giving some economic reasons which will compel its Government to return to the principles of private property and the sanctity of contract; and there are the usual articles on Ireland, Egypt, the Dominions and India.

The *National Review* in its July number trounces Lloyd George and the Coalition Government with its usual severity. It sees no hope of a compromise in Ireland and thinks the Government will eventually be forced to allow a Southern Republic,—a republic that will soon become Bolshevik. British soldiers, it says, cannot be asked to reconquer the republic after the way the Government betrayed them when they had the situation well in hand a year or so ago. "Let tribal Ireland stew in its own juice." It is an old solution held by many thoughtful men for the past 20 years: a bridge-head in Ulster, compensation for the Southern loyalists, and let the rest go to the devil in their own way, till they become tired of it. The existing situation of parties in Belfast, however, renders, this solution less simple than of yore.

An Austrain diplomat describes the events of the fatal "fortnight in 1914" preceding the outbreak of war, from the Austrian point of view. He regards as the most fatal of all mistakes, the failure to accept Sir Edward Grey's proposals for the temporary occupation of Belgrade by Austria, pending the submission of the whole case to arbitration by the Great Powers. Ian Colvin lays stress on the close connection between Lloyd George and the "Round Table," pointing out that the addresses of successive editors of the magazine have coincided with those of successive private secretaries of the Prime Minister.

REVIEWS.

"LECTURES ON LAND WARFARE."

BY

"A FIELD OFFICER."

The anonymous author calls this book "A tactical manual for the use of infantry officers," and no better words could be found to define its scope. It contains a series of lectures on the principles and practice of land warfare, commencing with the broad general principles of strategy and tactics, and then proceeding to discuss the methods of applying these principles in the various types and phases of battle action. In expounding principles and advocating methods the author has been careful not to transgress the teaching of our latest official manuals, consequently the book is orthodox and up-to-date. It does not in any way attempt to take the place of the official training manuals, but its aim is to supplement them by entering into somewhat fuller explanation of the evolution of tactics and of the reasons underlying modern methods, and finally by copious illustrations from military history, both of disasters which have resulted from ignorance or neglect of sound principles and of successes which have attended their appreciation and intelligent application. The selected illustrations range from the battle of THERMOPYLAE, B. C. 480, to the final great battle of the late war in November 1918 and include the battles of Napoleon, Wellington, Marlborough, von Moltke, Foch and many other great Captains of all ages. In his explanation of the why and the wherefore of principles and methods the author quotes copiously from the writings of Marshal Foch and also from Henderson, Hamley and other well-known English military writers. Thus, to quote from the preface, "The dry bones of the official publications are clothed with materials which may be supplemented at will by the student of Military History."

The book is of profound interest and considerable instructional value to all officers who value the study of their profession, and especially to those whose duty it is to assist others in acquiring a thorough knowledge of the art of war in general and infantry tactics in particular.

From the point of view of the army in India it is a pity that Frontier Warfare, with its peculiar problems as to the methods of applying the universal principles, is omitted and it will be a great advantage to us out here if this omission can be rectified in later editions.

LA REVUE MILITAIRE GENERALE
APRIL 1922.

"L' Armée qu'il nous faut."

A consideration of the preparations that France ought to make against a possible war with Germany.

The author's theme is based on the principle that it is better to make war in the enemy's country than in one's own. He considers that—anyway in the initial stages—such a war would be with France and Poland on the one side against Germany, Austria and Russia on the other. The balance of numbers would be in Germany's favour and therefore France must compensate for this by immediate invasion so as to disarrange Germany's necessarily slow mobilisation.

On this theory he proceeds to calculate the size of army that France ought to keep up. His figures are :—

(i) A striking force (always ready) for advance across the Rhine :—(20 Inf. Divs. & 12 Cav. Divs.) ...	300000
(ii) Nucleus (expandable to five times nucleus) on which will be built up the main army.	260000
(iii) A similar nucleus for a 3rd echelon in case of the war stabilising ...	50000
Total standing army ...	610000

"Nos colonies au secours de la France."

The writer pleads the necessity of raising a strong colonial army for service in France.

In his first chapter he deals with Germany's preparations for war against France, and her military policy which follows that of 1813. He estimates that in under two months she could put into the field 42 completely equipped divisions while mobilising behind them nearly 7 million men.

To those who say that she lacks the necessary material, he replies that this is not the case since she has vast concealed stores. But he considers that much of the material of the last war will be out of date in the next one which will produce many new and terrible scientific methods at which German chemists are now working night and day.

The question of financial resources does not affect the matter since Germany is self-contained, and her depreciated currency is entirely to her advantage, in fact she has deliberately created the present situation. Industry is flourishing and Germany since the war has become one vast industrial concern.

Her population is increasing rapidly, and although she has lost her colonies, it is impossible to hold down a growing population. The German will spread, overrun Russia and be in a far stronger position than before.

In the 2nd chapter he deals with the enforced reduction of the French army due to the necessity of economic reconstruction.

He touches on the hatred of France instilled into all classes in Germany, and on the activities of the monarchist party and their intrigues and murders, claiming that the so-called Republic is merely a piece of camouflage.

The German nation is naturally unfitted for democratic forms of Government and demands a monarchical rule, being accustomed to being ruled under strict discipline and having no desire or aptitude for ruling itself.

Since therefore war is certain and the French army has to be reduced while the birth rate continues to fall, the only remedy lies in enlisting a black army.

He gives details of the enormous reserves of black man power which France controls in Africa, and deals with the objections to their employment in Europe, all of which he considers negligible.

He cites the case of Imperial Rome calling in mercenaries to repel the Barbarians, but does not follow up the analogy by mentioning that the said mercenaries ended by ruling Rome.

In the third chapter he discusses world politics to prove that France would stand alone in such a conflict, since the other European states (including the British Empire) are breaking up and America and Japan are fully occupied with each other.

One ray of light appears towards the end of this instalment, the chance that Bavaria may oust Prussia from her dominating position. He thinks that Bavaria is working to this end and that if she succeeds a reasonable peaceful Germany may yet arise to take part with France in the reconstruction of Europe.

"La Defaite: Question morale."

An interesting article dealing with public opinion in Germany in 1918 and showing that the real cause of the German defeat was the loss of the 'will to conquer.'

MAY 1922.

"Les possibilités militaires de l'Allemagne"

A study of Germany's probable action in the event of war with France.

Since her present effectives are small and her mobilisation must be slow of necessity, the writer considers that in the first stage she would seek time by mobilising on a line well back from the Rhine, utilising all available troops and *soi disant* 'athletic organisations' to delay the French advance.

The most suitable defence line for Germany to take up in the initial stage, would be that running from the Dutch frontier

via Ruhrort—Duisbourg—Werden—Solingen—Singen Wetzlar—Hanau—Mittenberg and thence through the Black forest to the Swiss border.

As soon as sufficient troops had been mobilised she would again seek to advance to the Rhine and once there could point out to the French that they were in for a long period of trench warfare, in which—in the end—Germany's superior numbers would tell, and that the cheapest thing would be to wash out the treaty of Versailles and make a reasonable (from German point of view) peace.

He concludes by suggesting that a study of the growth of German railways during the next few years will show whether or not this theory is well founded. Armaments may be concealed and personnel camouflaged, but railway construction lies open for all to see and explains proposed line of strategy as clearly as do the secret diagrams attached to a plan of operations.

“La Defaite : question morale”

A continuation of the very interesting article in last month's issue, dealing with the downfall of Germany in 1918. This part carries the story up to the armistice giving the various stages which German opinion—official and public—passed through from the certainty of victory in June 1918 to the complete admission of defeat in November of the same year.

The final bowing to the allies' will was due not to lack of men or material in both of which the Germans were our equals if not our superiors—but to utter loss of morale by the nation as a whole.

The author finishes by saying that though the form of war may vary through the ages, the essence of it remains constant and in this article he has endeavoured to show that at the last victory and defeat are purely questions of morale.

“Nos colonies au secours de la France”

Continuing from last month, the author goes into the practical side of his proposals for recruiting a coloured army for service

in France. He points out that owing to the falling birth rate the annual conscription in France now brings in only some 2,00,000 men per year. The calling up of all these for a full term of service must retard the economic reconstruction so vitally necessary and hence he urges that their places for the present should be to some extent filled by colonial native troops.

He then deals with the characteristics of the various types recruited in the French colonies:—Arabs, Berbers, Blacks, Indo-Chinese, and Madagascans. Nomad Arabs he considers suitable for cavalry and animal transport services, Berbers and settled Arabs, and above all negroes, he suggests for infantry, while the Indo-Chinese have apparently proved their worth as M. T. drivers during the late war.

He deals once again with the objections to employing coloured troops in Western Europe. Economically it would pay France to employ them and as regards the racial question he thinks that the relatively small numbers employed would have no deleterious effect while their conduct compares favourably with that of the Germans.

He then gives definite figures for dilution. Taking a total peace strength of 800,000 (of which 525,000 in Europe) as suitable for the French army he suggests 5,50,000 coloured troops (350,000 in Europe). The proportion of white to coloured personnel in Europe to be as 1 to 2.

The remainder of the article gives detailed proposals re-organisation, terms of service, pensions, bounties, etc. etc.

The whole scheme is drawn up with the idea of lightening the burden of military service for France thus releasing more man power for economic reconstruction. Universal training will continue but the term will be much shorter, and all French conscripts will spend their time in training for war in the fighting arms, all garrison duties transport work, etc., etc., being carried out by coloured troops.

The system of dilution he proposes is like our own, viz., gunners of artillery, flying personnel, tank crews, etc., being white, while drivers, mechanics, and other non-fighting personnel can be coloured.

Throughout he lays stress on the fact that the value of coloured troops is directly proportional to the value of the white officers and N. C. Os. posted to them, and he insists that these must be of the best.

JUNE 1922.

Les Erreurs militaires fatales de la Russie des Tsars' (Gen Rostoutseff).

An interesting article on the Russian army during the great war, which throws considerable light on its weaknesses. The author who had previously served during the Russo-Japanese war, served in the recent war, both on the staff and as a regimental commander and claims therefore that he is entitled to speak with some authority.

The first point he deals with is the bad organisation of the reserve, its lack of trained officers and N. C. O's. many of whom were detailed unwillingly to reserve units because their C. Os. did not want them in their own. The reserve artillery units were the exception being as good and sometimes better than the active ones.

Referring to Ludendorf's complaint about the shortage of trained officers in 1918 he says that the same applied to Russia by 1916. In peace time, officer effectives were below strength and on mobilisation units were filled up from others with the result that these latter were left with practically no officers. In this as in other points in the article there are several lessons for India to bear in mind for the next war.

Flogging up to 50 lashes was authorised as a war punishment in the power of regimental commanders and as a result the death penalty was practically never inflicted; cowardice, desertion, etc., being punished by flogging.

N. C. Os. were wasted in 1914 in the same way as officers, so that even by 1915 there were none to train new drafts or units.

The system of training battalions was badly mismanaged. They were divorced from their regiments, found drafts for other

units, while it was the exception for sick and wounded ever to get back to their regiments. Consequently *esprit de corps* diminished rapidly. He emphasises the fact that in the French Army 82% of wounded men rejoined their own regiments.

This point is of interest since India has now adopted the training battalion system and unless checked similar faults might occur.

The system of drafts was bad and by 1916 there were practically no seasoned soldiers in the ranks. They filled rear formations instead, and there was a marked tendency to improvise new formations instead of reinforcing existing units. These new formations impressed the Allies on reading their numerical strength, but served no purpose against the enemy.

A very interesting paragraph deals with the organisation of the regiments, which owing to bad administrative arrangements on L. of C. had to be practically self contained. A unit for instance bought its own cattle, grazed them, slaughtered them, tanned the hides and made up the leather. Regimental H. Q. included proportions of soap makers, bacon curers, etc., etc. As the author says, the regiment led a life economically self contained. He discusses at some length, the question of 3 or 4 battalion organisation for regiments and considers that the war has proved that 4 battalions is too many. This is contradictory to our views, since the 4 battalion brigade appears to have survived the test of war satisfactorily.

The weakness of divisional artillery and insufficiency of arms and munitions in the Russian army was common knowledge during the war. The author quotes one or two incidents which seem to throw the blame of this on the General Staff. Passing on from that he attacks the supreme command for its lethargy in the years following the Russo-Japanese war especially in the matter of organisation and training.

The article concludes with a summary, the last paragraph of which refers to the Russian neglect of past lessons :—

"After each battle of any consequence, Ludendorf used to

collect a number of regimental officers and ask them most detailed questions as to what happened during the actions so as to give the army new instructions and meet the new needs arising.

Nothing like that with us, for leaving out the supreme command, even army commanders took no pains whatever to find out the opinions of regimental officers. "

The article is clear, concise, and worth reading.

"L'appui de l'infanterie par le canon" (Lt. Col. Allehaut).

A study of the controversial question as to whether guns should be attached to infantry for the attack.

Commencing with the fact that automatic weapons are infantry's chief opponents, and that the chief way to assist the infantry forward is to neutralise the M. G. by artillery fire, the author examines the present system.

Taking it first, theoretically, he points out that the modern tendency of artillery is towards long range surprise mass fire effect, the fire applied in the measure necessary to assist the infantry. The splitting up of artillery units militates against mass fire effect for which unity of control is essential. Hence theoretically artillery will give the maximum assistance if under a central control.

But when it comes to practice, we run up against the time question. Massed fire gives no effect unless applied at the time and place required. The only people who judge of this are the infantry actually advancing. The creeping barrage is all right so long as the time table is adhered to but in practice, sooner or later, it unavoidably breaks down and the infantry is left unsupported.

The enemy no longer put M. Gs. in known centres of resistance where they can be registered, he scatters them in shell holes, etc., where their presence is unknown until the advancing infantry runs into them. They are hung up, the barrage goes on according to time table. The fight then resolves itself into isolated combats under infantry commanders.

What the infantry wants at this stage is a few shells, but owing to difficulties of communication these are not

forthcoming. Hence decentralisation is essential. As the author says " Better a less powerful but more opportune fire effect, than a more powerful one useless because ill-timed. " He quotes Ludendorf's note insisting on artillery being placed under the infantry commanders.

It is true that six pounder guns are given to the French infantry, but these are insufficient. Field guns and howitzers are required. The objection that infantry commanders have not tactical skill or staff enough to control them, must be met by (i) more instruction (ii) keeping the H. Q. of the infantry and its supporting artillery together.

He makes the point, that even apart from the difficulty of communication with Div. H. Q., the artillery will naturally listen more to orders of the C. R. A. than to requests of infantry commanders unless these latter have been given command over a quota of guns.

Again real support is only possible, if guns move forward. Under the C. R. A. they will not do this until the last possible moment, since the whole idea is mass fire effect and movement militates against this,

If under the orders of the infantry, they can be moved up earlier, and the loss in mass of fire will be amply compensated for by the fire though less in volume, being more efficient.

His final proposals are the reorganisation of divisional artillery so as to permit of mixed groups of 75 and 120 (4.5 howitzers) with complete command sections being affiliated to infantry formations for any operation.

The bulk of the artillery will still be at the disposal of the Divisional Commander, who only loses a portion of his guns at a time when he can make little use of them, *viz*, during the infantry assault. When things stabilise again, offering better opportunities for massed fire, these groups will come under divisional control again.

The article is clearly written and states the arguments for both sides, but insists that the question is on where theory and practice differ. He expresses the fear that peace is leading us back into the realm of theory at the expense of hard bought experience.

L'offensive austro-allemanie contre L'Italie. (October-November 1917).

The first part of an Austrian secret account of the 12th battle of the Isonzo.

MILITAR WOCHENBLATT.

No. 47. 20th May 1922.

1. *Recollections of Field Marshal Conrad von Hotzendorf—Review by Genl. von Kuhl.*

The review is of the first volume only which covers the period 1906-1909.

When Conrad took up his appointment, the outlook for the dual Monarchy was very gloomy. There were 19 million Slavs, 7½ million Magyars, 2·8 million Roumanians and 7 million Italians all more or less hostile to the 10½ million Germans contained therein. Hungary wanted independence and desired to incorporate all the various Serbs, Croats, Ruthenes, Roumanians, etc., within her state boundaries into her kingdom. Servia was trying to snatch the Slav states from Austria and was aided and abetted in her purpose by Russia, who saw a way to Constantinople in the break-up of Austria and in Russian mastery of the Balkan States. The Italians wanted the Adriatic, the Roumanians parts of Transylvania—in fact, a pretty kettle of fish.

Against these combinations of enemies, both inner and outer, Conrad kept a stiff upper lip and always urged the Central Powers should deal with their opponents separately as favourable occasions arose instead of postponing the evil day till it should suit the enemies around them to attack together in overwhelming force.

He was anxious to attack Italy and Serbia in 1907 while Russia was still suffering heavily from the effects of the Japanese war, but both Aehrenthal—the Foreign Minister—and the Emperor himself strongly objected. In the crisis of 1908-09 he was again all out for war with a view of annexing Serbia. Serbia at that time wanted war too of course, but Russia, not being prepared advised against it.

Conrad was much disappointed and saw that for the future his policy must be to make Austria as strong as possible for the greater war that was bound to come. He had however many obstacles to overcome and when war broke out the Austrian army was rotten to the core.

Von Kuhl is not in agreement with Conrad's views and does not believe Austria had the vitality to survive the wars he proposed; and this notwithstanding a letter from Moltke, which Conrad quotes, deploring the loss of an excellent opportunity of settling with Serbia.

It was in 1909 that Conrad started his correspondence with Moltke as to the measures to be taken in the event of a great war: weak German forces in the east; Austria to hold off Russia there till Germany should have overwhelmed France, when Germany would assist Austria against Russia; outside these measures each to act in his own interests.

It must be admitted that Conrad was free from over-insistence on Austrian rights, but he looked forward to much too early an arrival of the German main forces in the East. The Germans, he said, thought they might move from the West on the 36th to 40th days of mobilization. He pointed out, however, that St. Privat was fought on the 33rd day and that, in future, the decisive battle would come even earlier, probably on the 21st or 28th day, according to whether France took the offensive or defensive, and the Germans should, therefore, arrive in the East on the 40th day. Moltke agreed that generally speaking the latter dates were correct and assured Conrad that the Germans would take the offensive against France with the greatest of speed, whatever

might be the consequences, and would certainly not leave their ally in the lurch.

Von Kuhl thinks Moltke rather optimistic. Even if the French took the offensive he was only allowing 9 to 10 days for transport inclusive of en-and de-trainment. Actually in 1914 the XIth and the Guard Reserve Corps received the order to entrain for the East on the 26th August. They arrived at their entraining stations, Aix-la-Chapelle, Malmédy and St. Vith on the 30th and so could actually have complied with the prearranged conditions had the enemy only been beaten beforehand. It is quite possible that the despatch of the two Corps to the East was partly due to this old promise of Moltke to Conrad.

If Russia joined in the war first Conrad wanted to employ very few troops against Serbia and to take the offensive with the main forces between the Bug and the Vistula. It would be more difficult if Russia joined in later as then the greater part of the Austrians would be already engaged against the Serbians. Even so, however, he wanted to take the offensive provided all the German divisions in the East moved against the Narev line.

Moltke wanted to leave it to the German leader in the East to decide whether he should take the offensive or defensive. Pressed by Conrad he laid stress on the great difficulties comparatively weak forces are exposed to in an offensive, but finally in March 1909 he wrote:—"However I will not hesitate to make the attack, in order to support the simultaneous Austrian offensive. Your Excellency can rely on this agreement ; it has been carefully considered."

Germany did all that was possible in August and September 1914 with her 9 divisions opposed to the 31 divisions of the 1st and 2nd Russian armies, but an offensive over the Narev was beyond her powers. The Marne failure prevented the transfer eastwards of large German forces and brought to nought the agreement between the two Chiefs of the Staff, and accordingly "Austria-Hungary had to bear the overwhelming burden incurred thereby—and she bore it." This reads as if the failure of the Austrian offensive was due to

lack of German support. Was it not rather that it was badly planned? The shape of the Galician frontier where the deployment took place was wholly unfavourable to an offensive. Moving towards the N. E. there was a danger of being flanked and turned from Podolia and Volhynia. Nothing is more difficult than to move to the attack eccentrically from a central position against an enemy in bow-formation. In 1909 Conrad reckoned on Roumanian support towards Jaffy to hold the Russians in Podolia. In 1914 this help did not materialize.

Moreover the Austrians made the mistake of marching half their forces against Serbia clearly in the deceitful hope that prevailed at the outset of limiting the war to Serbia.

Conrad says that only by an offensive between the Bug and the Vistula could the assembled Russian forces have been drawn to the south and prevented from marching on Posen and Berlin. Von Kuhl thinks the same end would have been reached if the Austrians had maintained a position in Galicia flanking such a movement. There are many objections to a strategical defensive but a double offensive against Russia and Serbia was doomed to certain failure.

II. *Scientific and industrial mobilization in France.*

Mainly extracts from "France Militaire" giving actual and suggested arrangements for the mobilization of the professions and the trades

III. *The entrance examination to the French Staff College, 1922.*

An interesting comparison of the type of papers set to the French candidates and that set to German candidates prior to the war. The French go in for a detailed knowledge of regulations and of the constitution and duties of the various arms. In military history a particular campaign of Napoleon is chosen, in order to stimulate the military ardour of the Frenchman. In geography probable theatres of war only are dealt with the Rhineland and Syria.

Compare this with the method of the Germans. In tactics, to a knowledge of detail, they preferred to lay stress on cultivating the power of making decisions, on the glad acceptance of responsibility, on the clear and logical foundation of decisions and the issue of simple yet definite orders connected with them. They only dealt with military history and geography on general lines.

IV. *The decision to retire from the Marne.*

The writer, Freiherr von Baldenstein, commanded a company on the Petit-Morin on the 9th September and, after a successful action, was ordered to retire instead of advance. The next day he asked an officer of the Staff of the 2nd Army the reason of the retirement. The reply was that von Bulow had ordered the retirement on his own responsibility. The writer thinks that had there been any question of O. H. L. being responsible the staff officer would have mentioned the fact to shield his chief.

No. 48, 27th May 1922.

I. The captive balloon in the German attacks in 1918.

BY

CAPTAIN MISCHER.

During position warfare the balloon had been solely an aid to the Artillery. It had now to become a tactical auxiliary to all arms. It was therefore arranged to make the balloon sections mobile across ordinary country, with their supply echelons on roads. The detachments were specially trained in the laying of telephone lines, in the quick erection of stations and in rapid inflation and deflation of envelopes. Sufficient gas was taken for two complete inflations so that the section was independent of rear communications for some days at least. Wireless was not available but the balloon sections were connected by all other possible means to their divisions, to the artillery commanders and to their own H. Q., and they had a liaison officer at Divisional H. Q. whose special business it was to distribute their reports to the General Staff and to the artillery and to keep the sections in close touch with the actual situation.

During the early hours of the 21st March the balloons, which had been pushed forward to the fire-trenches, ascended. In spite of the bad light they were able to give warning to the General Staff of the assembly in the course of the morning of various bodies of British troops for the counterattack, with valuable results. All along the front the first and only reports came from the balloons. Each balloon had a battery attached to it which came into action whenever the infantry sent up red lights or indicated a favourable target. The balloons pressed hard on the heels of the infantry. On the 22nd and 23rd, when the light conditions were good, their performances reached their highest point. Batteries crowded round them in order to get full value of their observations. In advanced positions telephone lines were constantly broken and pigeon post was resorted to. The reply of the enemy to the balloons was weak at first but grew much stronger in the course of the battle. On the front of the 17th Army 100% were shot down by artillery fire.

II. *The new Danish Defence Force.*—By our Danish Correspondent.

The report of the Danish Commission on the re-organisation of the Danish defence forces shows a wide divergence of opinion. The Social Democrats regard 6,000 civil police as a sufficient defence. The Radicals would like a combined defence force of 30,000 men and would abolish the General Staff, the Naval Staff, Command Staffs and the Life Guards. The Peasant Party suggest 67,000 men—and as this party with the Conservatives will have a majority in the Chamber—it is probable that the suggestion will be accepted. The Conservatives would like to go to 100,000, the Chief of the Staff to 119,000 and a Corps Commander to 150,000. All these figures refer to mobilized strengths.

III. *The organization of the Royal Hungarian Militia.*

Numbers were fixed by the Versailles Treaty at 35,000 which, the *Militär-Wochenblatt* considers as very small in view of the disturbed condition of the country. The Interallied Commission

has at last settled the organization of this body,—7 mixed brigades, 4 hussar regiments, 4 batteries and 3 pioneer battalions.

IV. *Dutch Military matters. January to March 1912.*

The law for the reorganization of the army has been accepted and comes into operation this year. It entails considerable reductions. Infantry companies from 288 to 80, squadrons from 17 to 8. Only the artillery retains its former strength, the heavy artillery receiving a considerable increase.

V. *Special courses for Generals and other senior officers in France.*

Last year there was a course lasting 4 months. This year 29 specially selected Brigade and Regimental commanders will do a further 6 months at the French Staff College.

VI. *The training of officers in the Czecho-Slovakian Army.*

VII. *Wrangel's Army.*

Tschitscherin raised the question at Genoa of the danger to Russia and to the countries in which it is quartered of the army of Wrangel, and Lloyd George in reply did not show himself very friendly-disposed towards this force. At present it is quartered—20,000 in Serbia and 27,000 in Bulgaria. Wrangel is working hard at the training both of officers and men and hope his troops will form the backbone of future Russian army.

VIII. *Various notes.*

In Moscow tramway prices are now as follows:—To 1st halt 75,000 roubles; to 2nd halt 120,000 and to 3rd halt 150,000 roubles.

Train journeys cost:—Moscow to Archangel 9,200,000 roubles to Petrograd 6,400,000 and to Tashkent 18,000,000 roubles,

No. 49, 3rd June 1922.**I. France and the Rhineland.**

France has pressed towards the Rhine for hundreds of years. At first it was to break the power of the Hapsburgs who then ruled Spain, Germany and a great part of Italy. Henry IV began the work and it was continued by Mazarin and Richelieu. A memorial by Mazarin dated 1651 is quoted which might have been written by Foch to-day demanding as boundaries of France—the Pyrennees the two seas, the Alps and the Rhine. The only change is that Germany has now replaced the Empire of the Hapsburgs.

The national spirit of France works towards this end in an aggressive yet fearsome spirit which is well depicted in Maurice Barré's recent book "*Les Bastions de l'Est.*" This spirit leaves us cold. What Napoleon and other great Frenchmen failed to hold against a torn and divided Germany, France will never hold against a united Germany. The French banners will vanish as ever before from the banks of the Rhine.

II. The military and political world situation.

The Gallic cock is still crowing, to the disturbance of the whole world. The Versailles Treaty was not severe enough; Germany should be punished further; Germany is avoiding disarmament and deceiving the world. The Belgian follows obediently in his wake: Physical culture for all youths to enable them to bear military service, a sports ground, a gymnasium and a swimming bath to every town of over 5,000 inhabitants. However, between orders and execution in Belgium there is a wide gap.

France is no longer popular in America, for Washington disclosed her as the true disturber of European peace. Her enormous expenditure over æroplanes and to a lesser extent over submarines might well drive Great Britain for safety's sake into counter-measures, were not the English anxious at any cost to keep the peace with their old allies.

France by the absorption of Alsace-Lorraine has returned to her pre-war strength. She is however trying to raise an annual contingent of 250,000 against one of 200,000 before the war. This can only be done by a reduction of the military standard. In any case her efforts are vain. The population of Germany is now 62 millions in spite of reduction of territory; in a few years it will be 75 millions against a French population of, 36 millions. France must be beaten if only by pure weight of numbers.

III. *Captive balloon in the German attacks in 1918.*

In the April attacks weather conditions prevented effective balloon observation for the first two days; but on the 11th with a better light very valuable reports were sent in.

Twenty-three balloon sections, prepared for a war of movement, accompanied the attack on the Chemin des Dames. Again owing to the rapid advance of the infantry they had to give up telephone connections and take to a pigeon service. Many balloons were shot down but those remaining continued to send unceasing reports to the troops.

The July attack—the last of the German offensives—was a failure. The balloons were unable to make progress. Nevertheless they discovered, and successfully ranged their artillery upon large numbers of the enemy's batteries.

IV. *Military affairs in Italy Dec. 1921 to Feb. 1922.*

Expenses are being reduced, 3,000 to 4,000 officers go in the forthcoming financial year. The law limiting length of active service to 12 months cannot be introduced yet, for it would entail a great scarcity of trained men this summer. A gloomy picture is painted of Italy's industrial, financial and political position.

V. *R. D. B. and Reichswehr, by Captain Pregers.*

A protest by the writer against the constant abuse of Prussian officers in the organ of the R. D. B. (Association of past and present German soldiers).

VI. *Battle as a mental experience.*

A review of Ernst Junger's second book, the general tone of which is perhaps best given by:—"And ever, so long as the running wheel of life turns in us, will this war be the axle on which it turns."

His first book, "In storms of steel" had a great success. Equal success is anticipated for the second.

VII. *The recollections of Crown Prince William.*

A review by Major Anker which leaves the contents entirely alone and deals solely with the relative responsibility of the Crown Prince and Herr Rosner (the editor) as to style and form.

NO. 50 10TH JUNE 1922.**I. *The Political Theatre.*—by Lt. Genl. V Altmack.**

An article of no interest.

II. *Youth in the army.*

Some considerations on three recent novels by young officers—two by Ernst Junger and one by Hermann Hesse.

III. *The Field Artillery of the United States.***IV. *La Paix.***

Remarks on M. Tardieu's book.

V. *Pay, Michel, Pay?*

As an instance of how the German Government has to suffer for spending so little money on the pre-war army it may be mentioned that it has now to pay for the privilege of furnishing the rooms of the district delegate at Bergheim—one Captain Williamson—the sum of Marks 46,411,629. For French and Belgium officers we have to pay far more than this.

NO. 51, 17TH JUNE 1922.**I. *The Politico Military situation in Poland and the Balkan States January to March 1922.***

The Polish army is gradually being reduced to its peace strength of 250,000. It is now about 3,00,000 strong. Physical training is given to youths from 7 to 17, which is supervised by military societies formed in each district. The army is organised and equipped on the French model, but is badly clad.

There is still tension between Russia and Poland, and Russia declines to make any trade agreement with Poland. Neither Russia nor Germany take kindly to Poland's efforts to place a broad bar of Francophile states between the two countries.

The Polish-Lithuanian situation is unchanged, but trade and defensive treaties have been made with the other Baltic states.

The economic situation in Poland shows no improvement.

II. *The war in the North Sea. Sept. to Nov. 1914.*

A review by Admiral Dick of the official account. German leadership suffered severely from the differences of opinion as to whether the German battle fleet should be employed or not. The official view was that it should be kept intact till the end of the war as a valuable bargaining asset. Tirpitz and others strongly opposed this. The result was several mishandled and fruitless adventures.

III. *Psychology.—the General.*

A review of a book on this subject by Kurt Hesse. The effects of mass-psychology at Gumbinnen are dealt with in detail. The German soldier then felt himself to be part of a small outpost facing a mighty host. His comrades had all gone off to the West where with overwhelming numbers they were going to beat the Frenchmen, while he was being sacrificed. Hence the German defeat,

The East was to become much more popular later. The book continues to deal with psychological effect on the troops and on the people through Verdun (the effect of which was particularly depressing) up to the end of the war. The reviewer welcomes the book as German psychologists are rare, the German being ordinarily unmoved by idealism.

IV. *Deliberate Franco-Polish attempts to irritate Germany.*

Chiefly anti-German statements extracted from newspapers.

NO. 52, 24TH JUNE 1922.

I. *The South East European States.*

The situation in S. E. Europe is still dominated by the Little Entente (Poland, Roumania, Yugo-Slavia and Czecho-Slovakia) whose endeavours are directed towards three main objects:—

- (1) The military cleavage from Germany of her former allies, Hungary and Bulgaria. (Austria has already been drawn to a certain extent into the circle of the Little Entente).
- (2) Economic federation of the Danube states, not under the tutelage of the Western Powers.
- (3) A position equal to that of the Great Powers at the discussion of any questions of general European interest.

Thanks to the efforts and exceptional capacity of M. Benes great progress has been made already in these directions. The countries of the new Quadruple Alliance have a combined population of 70 millions and armies counting 912,000 men.

II. *Technical survey.*—by Captain Polster.

The new American models include two types of 75 m. m. field gun, one of which has a split trail, a 105 m. m. field howitzer which takes the same split trail carriage as the gun, and a pack howitzer of 75 m. m. The field gun has a range of 14,500 yards and its wheels have tyres of solid rubber.

III. *The day of standing armies.*

An extract from Oswald Spengler's book, "The end of Twilight-land". Napoleonic armies counted hundreds of thousands, pre-war armies numbered millions. We are going back to the former but it must not be supposed for a moment that the new procedure will exercise the war spirit.

IV. *Germany's expenditure in arms and ammunition in the world-war.*

Five months after the beginning of the war the daily output of rifles was 1,200; later it rose to 2,000. In the autumn of 1917 the monthly output of machine guns was 13,000, that of field guns 3,000.

V. *Practice regulations for trench mortars.*

A new issue. Artillery methods are followed for the most part and those suitable for the war of movement rather than that of position.

VI. *The quarrel over a meaning.*

A discussion as to whether the words "Schuld, Unschuld" correctly express Germany's guilt or innocence with regard to the war.

VII. *Germany must be destroyed.*

A German translation of posters placarded in Paris inciting France to take instant advantage of her present military superiority to destroy Germany utterly.

NO. 1, 1ST JULY 1922.**I. *Politico-Military matters in Russia. February to April 1921.***

The army is at pre-war strength in spite of the fact that the population has dropped from 168 to 130 millions. The Government gold reserve has dropped from 750 to 30 millions. Church treasures are being impounded. There is no certain news of Lenin's health. At the 11th Congress he was heckled by a Communist for lapsing from the true faith in recent orders; he promised no further lapses would occur.

The hopes raised by Genoa have dropped.

The general situation is as bad as ever.

II. *The extradition list.*

The trials began again in Leipzig on the 28th June. 890 Germans of all ranks, whose names have been branded throughout the world in many cases, especially where France is concerned, on the flimsiest of evidence. Fortunately they are sure of real justice at Leipzig.

III. *The world in arms : Germany powerless.*

A tabular statement showing war strength and percentages with regard to population of war strength and peace strength of the various powers.

IV. *Modern War-leadership.*

An extract from Oswald Spengler's book "The End of Twilight-land."

V. *Bolshevism.*

A favourable review of a book by v.Bothmer, "With Count Mirbach in Moscow".

VI. *The disbandment of the Austrian army.*

REVUE MILITAIRE SUISSE

MAY 1922.

"L'offensive d'une division."

A lecture given by a French Officer to a gathering of the Swiss Officers' Association.

It deals with an offensive by a division in Trench Warfare. The lecturer in opening his lecture explains that he has chosen an

operation of position warfare since it is likely to be the normal of future wars, and in any case the more difficult type. If one can deal with this type, one will be able to deal with any other.

If his views are authoritative, there would seem to be considerable divergence between English and French ideas.

After explaining the general tactical situation on the map which is reproduced with the lecture, he explains the general dispositions for the attack, about one half of which deal with artillery. In this connection he quotes a French Training manual of 1916:—

“Infantry alone has no offensive power whatever against obstacles defended by fire and supported by accessory defences.

If a line is stopped by intact defences occupied by the enemy, reinforcing the front lines by reserve troops has no chance whatever of carrying the position, it will simply increase casualties.

One can not fight men against machines.”

His preliminary employment of pioneers is analagous to our own practice, but the field companies are expected in addition to ‘the most varied tasks, to assist signals in laying out forward arteries of communication.

The principles governing the employ of signal communications seem similar to our own as laid down in Signal Training, Part VIII.

It is to be noted however that the tanks are not to be employed until the infantry has passed over the broken up zone of the first two objectives. The reason for this decision is that the bad ground would reduce the pace of the tanks to less than that of the infantry and so hold back the latter in the enemy’s barrage zone.

The rest of the lecture will follow in a later issue.

The remaining articles are of purely Swiss interest.

JUNE 1922.

"La conduite de la guerre jusqu'a la bataille de la Marne."

This article is a review of the book of the above title (Lt. Col. Grouard) dealing with the French plan of campaign for 1914 (plan XVII) and with the actual events up to the end of the battle of the Marne.

Col. Grouard is a well known military writer and in 1913 sketched out the actual course which the Germans took in 1914, a fact which lends some weight to the opinions given in his new book.

Prior to the war he was one of if, not the chief, representatives of the 'strategic defence' party in French military circles, opposed to the (all out) immediate attack doctrine so dear to the General Staff of those days. His views have been confirmed by the complete failure of the French plan which had to change in the end to the deferred offensive which he had always advocated. Instead however of a prepared measure it became an extemporised one.

His logical exposition of the course of events shows how true is the old maxim that victory goes to the general [who makes the fewest mistakes, for on both sides mistake succeeded mistake with the utmost regularity.

Not content with mere destructive criticism, he follows it up with constructive work, both as to plan XVII and the actual conduct of the Marne battle.

His criticisms and suggestions are based on the principles of war, to the neglect of which in pre-war French teaching he attributes so much of the French failure.

It is interesting to note how he supports General Lanrezac, whose sole fault he says was that "he was always right when G. H. Q. were wrong."

From the lengthy review, Lt. Col. Grouard's book seems a desirable addition to a military library.

In the continuation from May of '*L'offensive d'une division*' the author goes on to deal with the details regarding the task of the different arms in the actual attack. For an army which has done its turn of trench warfare there is nothing particularly noteworthy in the article.

The article dealing with the training of troops in 1914 is of purely Swiss interest, and the rest of the number contains merely the usual monthly notes on Swiss and foreign armies, and some reviews on books.

The number for April contains no articles of great interest. All are of purely Swiss interest and the bulk of the number is made up of an article on the democratising of the army, and the new training manual of bridging for the Swiss army.

COTTON & MORRIS,

Wine, Spirit and General Merchants

ESTABLISHED OVER 50 YEARS.

Some of our departments :—

**Picture Framing, Stationery,
Kitchen Goods & Hardware,
Sporting Requisites, Brassware
Wines, Stores & Tobacconists, etc**

The Mall, Simla.

Telephone 733.

Telegrams "Exchange," SIMLA.

Alliance Bank of Simla, Ltd.,

with which are incorporated

The Punjab Banking Company, Limited.

The Delhi and London Bank, Limited

AND

The Bank of Rangoon, Limited.

Authorised Capital	...	Rs. 3,00,00,000
Subscribed & Fully Paid-up Capital	„	88,51,800
Reserve Fund	„	42,00,000
Reserve Against Depreciation of Govt. Paper & Other Investments.	„	11,00,000

Head Office :—SIMLA.

BRANCHES :—

Abbottabad.	Calcutta.	Karachi.	Nowshera.
Agra.	Cawnpore.	Kasauli.	Peshawar Cantts.
Ajmere.	Dalhousie.	Lahore.	Peshawar City.
Allahabad.	Darjeeling.	Lahore Cantts.	Quetta.
Ambala.	Dehra Dun.	Lucknow.	Rangoon.
Amritsar.	Delhi City.	Lyalpur.	Rawalpindi.
Bareilly.	Delhi, Civil Lines.	Meerut.	Saharanpur.
Benares.			
Bhopal	Ferozepore.	Multan.	Sialkote.
(Bhopal State).	Gwalior.	Murree.	Simla, Town Office.
Bombay.	Jullundur.	Mussoorie.	Srinagar (Kashmir).
		Naini Tal.	Ujjain (Gwalior State).
		Sukkur (Sind).	

Sub Offices.

Aminabad (Lucknow).	Jhind (Gwalior).	Hapur (Meerut).	Meerut City.
Barnagar (Ujjain).	Gulmarg (Srinagar).	Mandsour (Ujjain).	Sehore (Bhopal).
Bhilsa (Ujjain)	Sadar Bazaar (Delhi).	Sipri (Gwalior).	Pachhar (Gwalior)
	Shujalpur (Ujjain).		
	Agra City.	Bareilly City.	
	Cawnpore City.	Jullunder City.	
	Rawal Pindi City.	Guna (Gwalior).	

LONDON BANKERS :—

Messrs. BOULTON BROS. & Co., 39, Old Broad Street, E.C.
BARCLAY'S BANK Ltd., 170, Fenchurch Street, E. C.

Agencies in the Principal Cities and Towns in India, Burma and Ceylon.

Current Accounts are opened and transferred free of charge to any other Branch.

Bills of Exchange are purchased and collected, Drafts and Telegraphic Transfers issued, Letters of Credit granted.

Deposits are received for fixed periods and at short notice on favourable terms.

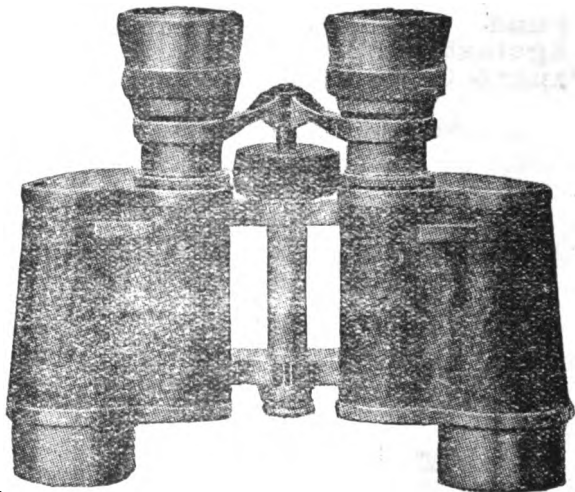
The Bank undertakes Banking business of every description, the purchase and sale of Government Paper Stocks and Shares and affords all possible facilities to its Constituents.

Rules of Business and any further information can be obtained on application to Head Office or any of the Branches.

THE (NEW MODEL)

"SEARCHLIGHT"

SERIES OF
STEREO—PRISM BINOCULARS.



MADE IN THREE MAGNIFICATIONS.

ILLUSTRATED BROCHURE ON APPLICATION.

ALL MILITARY REQUISITES STOCKED 

Range-Finders, Heliographs, Signalling Lamps, Megaphones, Mapcases,
Protectors, Sketching Boards, etc.

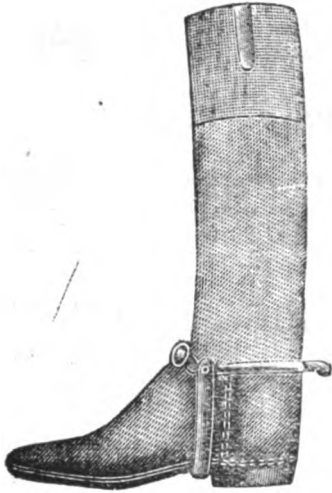
LAWRENCE & MAYO LTD.

(INCORPORATED IN ENGLAND.)

BOMBAY, CALCUTTA, MADRAS, LUCKNOW,
DELHI, KARACHI, SIMLA & RANGOON.

Telegraphic address for all Branches—"LYNX."

Long Boots--A Speciality.



WATTS & Co.,

ESTABLISHED IN INDIA 1808.

MAKERS & IMPORTERS OF
Footwear, Saddlery & Harness.

SIMLA—LAHORE—CALCUTTA.

THOS. COOK & SON.

BANKERS & AGENTS.

Bombay, Calcutta, Delhi, Rangoon and Colombo.

Chief Office :—LUDGATE CIRCUS, E.C.

155 BRANCHES THROUGHOUT THE WORLD.

PASSAGES engaged by all Lines. Holders of our tickets are met at all ports. Outward Passages engaged and tickets supplied from any part of the World to India, by mail or cable.

BANKING and exchange business of every description transacted. Current Accounts opened. Pay and Pensions collected. Remittances made, Letters of Credit and Circular Notes issued for the use of Travellers.

BAGGAGE received, stored and forwarded. Cargo shipped to all parts of the World at lowest rates. Inward consignments, such as Hardware, Piece-goods, Machinery, Stores, etc., for Merchants, Messes and Clubs, cleared and forwarded at fixed rates. Insurances of all kinds effected on Baggage, Cargo, Live-stock, Mess Property, etc,

THE ORIENTAL TRAVELLER'S GAZETTE containings ailing dates and fares of all lines, sent post free on application. Published monthly.

GRINDLAY & CO.,

BANKERS & AGENTS.

BOMBAY, CALCUTTA AND SIMLA.

Head Office :—54, Parliament Street, LONDON, S.W.

ESTABLISHED 1828.

Agents & Correspondents throughout the World.

BANKING.

Current Accounts kept on the usual Banking terms.
Fixed Deposits received.
Pay, Pensions, etc., realised.
Advances granted on approved security.
Remittances and Telegraphic Transfers made.
Letters of Credit and Circular Notes issued.
Securities received and Interest and Dividends collected.
Investments and Sales effected.
Grindlay's monthly Investors' Guide free to constituents.

PASSAGES.

Passages booked to all parts of the world. No commission.
Grindlay's Passage Handbook, List of Sailings, Plans of Steamers
and full particulars supplied on application.

AGENCY.

Passengers met on arrival by Rail or Sea.
Baggage and consignments cleared, forwarded or stored.
Packages collected and shipped.
Telegrams coded and despatched.
Insurance, Life, Fire, Accident, Marine, Burglary, etc., effected
with all the best companies.

**A copy of the Firm's Balance Sheet, duly certified
by Chartered Accountants, will be
forwarded to any banking constituent
on application.**

Simla Office :—"BANK BUILDINGS," (next to G. P. O.)

Telegraphic Address :—"GRINDLAY," SIMLA.

Telephone No. 525.



E. DUCKETT & Co

[*By Government Appointment*]

EAST STREET POONA

MONUMENTAL SCULPTORS

POWER MACHINERY & TOOLS

**ARTISTIC MEMORIALS IN SELECTED
MARBLE ERECTED ANYWHERE IN INDIA**

LYON & LYON,

GUNMAKERS,

*Late of Purdey's, Audley House, (London) Grand Hotel Arcade
Calcutta.*

**WORLD'S RECORD SALE OF BULLETS FOR USE IN SHOT GUNS : SALES OF
LYON'S PATENT EXPANDING "LETHAL" BULLET EXCEED THE
UNPARALLELED HIGH MARK OF 700,000.**

**SPECIALLY DESIGNED FOR USE IN CHOKE OR CYLINDER BORE
BARRELS INDISCRIMINATELY.**

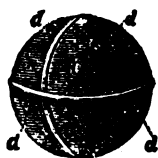


FIG. 1. Exterior view
of the "Lethal" Bullet.
The letter *d* marks the
upstanding ribs which
characterise the bullet.

**Lyon's "Lethal"
Has Won
Unanimous Praise
from
Press and Public.**



FIG. 2. Sectional view
showing the interior
steel discs promoting
expansion on impact

Editor of London "Field."—The "Lethal" is quite innocuous to choke
bore barrels as far as our test and the subsequent of sportsmen go to
show.

Mr. N. I. writes:—It may interest you to know that.....was
staying with me last month andthis party shot seven
tigers and two panthers with "Lethal" bullets in shot guns.

THE ASIATIC REVIEW

(Published Quarterly.)

5s. per Issue.

£1 per annum

PRESS OPINIONS OF JULY ISSUE 1921.

EDINBURGH EVENING NEWS :—"The July number of the 'Asiatic Review' will appeal to a large clientele."

MORNING POST :—"There will be special interest in the July issue because many of the Asiatic questions of the moment are discussed."

TIMES LITERARY SUPPLEMENT :—"A sense of topical fitness is shown."

BENGALÉE :—"The Asiatic Review' for July is a very good number."

CHICAGO TRIBUNE :—"The Asiatic Review' is the best-informed Far Eastern periodical."

PRESS OPINIONS OF JANUARY ISSUE 1922.

TIMES LITERARY SUPPLEMENT :—"This instructive quarterly is fully alive to the new ideals and aspirations surging through the lands to which it devotes attention."

SCOTSMAN :—"An issue of all round interest in which various problems.....are presented in an informed and enlightened manner. Excellent financial, commercial, literary, and archaeological sections."

MORNING POST :—"A highly interesting number, the articles in which range over India, China, Korea, Burma, Egypt and Palestine."

REGULAR FEATURES.

POLITICAL ARTICLES.

COMMERCIAL SECTION.

EDUCATION SECTION.

ARCHAEOLOGICAL SUPPLEMENT.

PROCEEDINGS OF THE EAST INDIA ASSOCIATION.

Literary Supplement.

Review of Oriental Societies.

How to obtain *The Asiatic Review*

(33rd Year of Publication).

Please use the SUBSCRIPTION ORDER FOR.

To the Manager, ASIATIC REVIEW,

3, VICTORIA STREET, LONDON, S. W. 1.

Date

Please send THE ASIATIC REVIEW for Twelve Months, beginning with..... to.....

For which I enclose £ 1.

By Special



Appointment.

RANKEN & Co. Ltd.

Tailors & Outfitters,

4, OLD COURT HOUSE STREET
Calcutta.

Patterns forwarded upon application.

Travellers periodically visit principal Military Stations, and arrangements for fitting can be made.

Head Office:—CALCUTTA.

Punjab

Branches:

} SIMLA, DELHI, LAHORE, RAWAL-
PINDI & MURREE.

UNIFORMS

*For all Regiments and Departments.
Political and Diplomatic.*

MAPS PUBLISHED BY THE SURVEY OF INDIA

are obtainable from the MAP RECORD AND ISSUE OFFICE, 13, WOOD STREET, CALCUTTA, on the PUBLIC SERVICE on cash payment or book transfer, and for PRIVATE USE on cash payment or V. P. P.

1. TOPOGRAPHICAL MAPS are published on the scale of 4 MILES TO 1 INCH, 2 MILES TO 1 INCH AND 1 MILE TO 1 INCH :—

(a) THOSE SURVEYED AFTER 1905 are printed in colours in sheets 23 INCHES \times 19 INCHES, price ONE RUPEE per copy.

(b) THOSE SURVEYED PRIOR TO 1905 are printed in black only or in black with hills in brown, in sheets 49 INCHES \times 27 INCHES price Rs. 1-8-0 per copy.

(c) 4 miles to 1 inch maps are printed in two editions, viz., LAYERED and POLITICAL, as described in para. 4, except those from old surveys, which are printed in black and styled PROVISIONAL, price ONE RUPEE per copy.

2. GEOGRAPHICAL MAPS are also obtainable as follows :—

(a) SOUTHERN ASIA SERIES, scale 1 : 2,000,000 or nearly 32 miles size 36 inches \times 24 inches, price Rs. 2 per copy.

(b) INDIA AND ADJACENT COUNTRIES, scale 1 : 1,000,000 or nearly 16 miles to 1 inch in LAYERED and POLITICAL editions and from old surveys as PROVISIONAL ISSUES ; size 23 INCHES \times 19 INCHES, price ONE RUPEE per copy.

(c) INTERNATIONAL MAP OF INDIA, scale 1 : 1,000,000 or nearly 16 miles to 1 inch in LAYERED edition (without shading of hills), size 30 inches \times 26 inches, price ONE RUPEE per copy.

(d) GENERAL MAPS OF INDIA ; scale 32 miles to 1 inch in sets of 12 sheets, each sheet 25 inches \times 32 inches, in LAYERED and POLITICAL (without hills) editions, price Rs. 12 per set. Maps of India on various smaller scales and miscellaneous special maps illustrating Railways, &c., are also available.

3. MISCELLANEOUS maps are also published as below :—

(a) PROVINCIAL MAPS, on scales 16 miles and 32 miles to 1 inch.

(b) DISTRICT MAPS, on scales 4 miles and 8 miles to 1 inch.

(c) CANTONMENT AND TOWN MAPS AND OTHER MISCELLANEOUS MAPS, on various scales and prices.

(d) FOREST MAPS, obtainable only from the OFFICER IN CHARGE, FOREST MAP OFFICE, DEHRA DUN.

4. The styles of printing of 4 miles to one inch and Geographical maps are as follows :—

(a) LAYERED EDITION, printed in colours with contours and graduated layer tints to show altitudes and shading to emphasize the hills (Colour ribbands along boundaries cannot be added to this edition).

(b) POLITICAL EDITION, printed in colours with colour ribbands along boundaries, contours to show altitudes and shading to emphasize hills.

(c) PROVISIONAL ISSUE, generally printed in black or black with hills in brown. Colour ribbands along boundaries are added by hand when required at an extra cost of 2 annas per sheet.

5. MAP CATALOGUES can be obtained at ONE RUPEE per copy.

6. Maps can be mounted on cloth and folded or mounted on rollers for hanging, &c., at a small extra charge.

7. The prices quoted for various maps are exclusive of postage and V. P. P. charges. Any further information will be given free of charge on application to the MAP RECORD AND ISSUE OFFICE, 13, WOOD STREET, CALCUTTA.

BARR AND STROUD
LIMITED.
GLASGOW.

RANGEFINDERS
AND
FIRE CONTROL

FOUND

DEC 8 1906

UNIV. OF MICH.
LIBRARY

UNIVERSITY OF MICHIGAN
3 9015 03510 3335

FOUND

DEC 8 1911

UNIVERSITY OF MICHIGAN
LIBRARY



